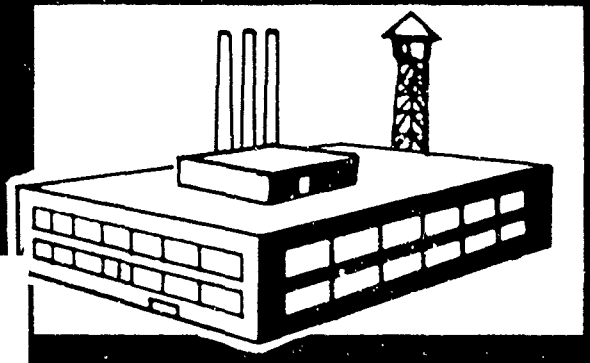
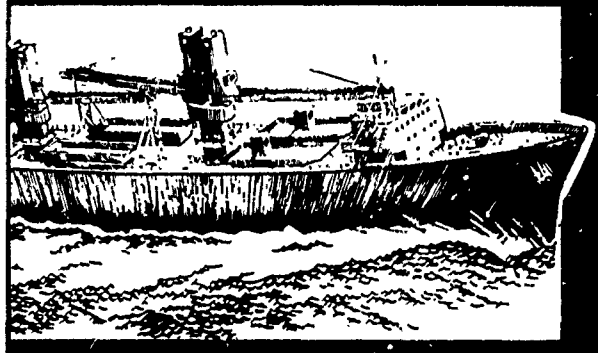
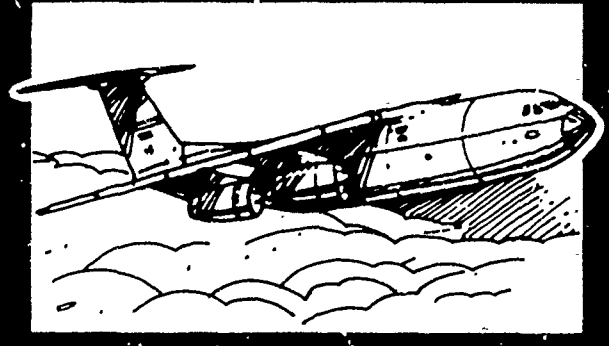






REPORT CONTROL SYMBOL DD-M(A)1592

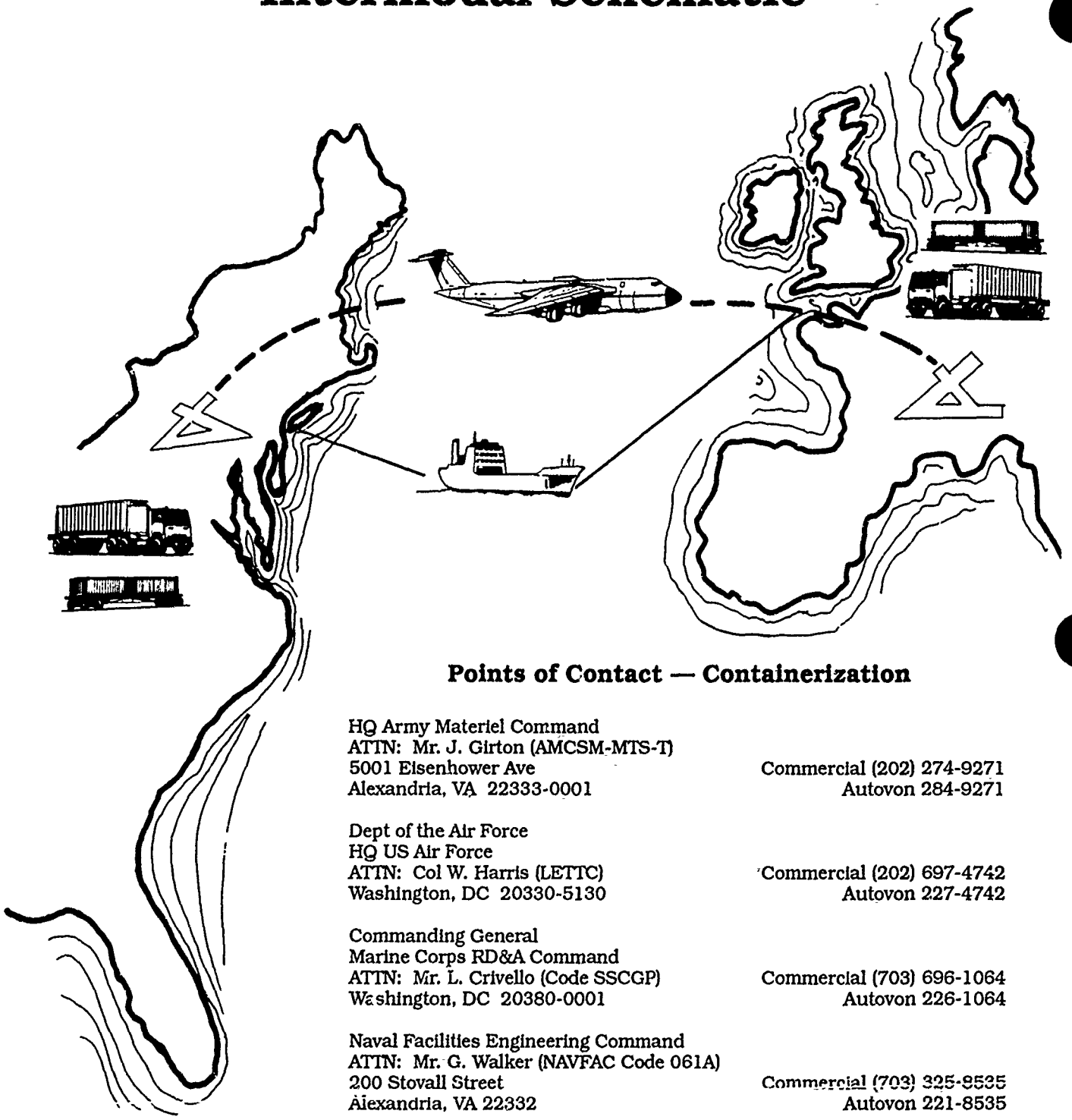
(2)

1990 CONTAINER SYSTEM HARDWARE

STATUS REPORT

Distribution is unlimited.

Intermodal Schematic



Points of Contact — Containerization

HQ Army Materiel Command
ATTN: Mr. J. Girton (AMCSM-MTS-T)
5001 Eisenhower Ave
Alexandria, VA 22333-0001
Commercial (202) 274-9271
Autovon 284-9271

Dept of the Air Force
HQ US Air Force
ATTN: Col W. Harris (LETTC)
Washington, DC 20330-5130
Commercial (202) 697-4742
Autovon 227-4742

Commanding General
Marine Corps RD&A Command
ATTN: Mr. L. Crivello (Code SSCGP)
Washington, DC 20380-0001
Commercial (703) 696-1064
Autovon 226-1064

Naval Facilities Engineering Command
ATTN: Mr. G. Walker (NAVFAC Code 061A)
200 Stovall Street
Alexandria, VA 22332
Commercial (703) 325-8535
Autovon 221-8535

Naval Sea Systems Command
ATTN: Mr. M. Fink (PMS-377K)
Washington, DC 20362-5101
Commercial (703) 602-4834
Autovon 332-4834

Naval Supply Systems Command
ATTN: Mr. F. Crawmer (Code 051B)
Washington, DC 20376-5000
Commercial (202) 746-3991
Autovon 286-3991

FOREWORD

Today, virtually all of the products and equipment shipped overseas, as well as by rail, are shipped using some form of shipping container. The Merchant Marine Industry has made the transition from the breakbulk fleet of the past to the current containership fleet. Because of the Merchant Marine Industry's impact on the transition of supplies by sea, the Department of Defense (DOD) has placed an increasing emphasis on containers to deploy and support forces in overseas contingency situations.

This publication was initiated in 1977 by the former office of the Project Manager, Army Container Oriented Distribution System, to provide information to various Army activities which had an interest in the development and fielding of the Container Oriented Distribution System. Later, the Joint Intermodal Steering Group requested that the status of the Departments of the Navy and Air Force containerization programs be included, beginning with the January 1979 issue. In November 1981, publication responsibility was transferred to the US Army Belvoir Research, Development and Engineering Center.

This publication is published in accordance with DOD Directive 4500.45 (DOD Transportation Policy Council). It has been published annually since 1982, with exception of 1987 and 1988.

This year, the format is unchanged and includes each program's National Stock Number (NSN) to aid in locating the programs in the military supply system.

The project director for this publication is Mr. Norman Fertman and the technical coordinator is Mr. William Brower, both at Autovon 354-1143 or Commercial (703) 664-1143. Comments on this report may be submitted to:

Commander
US Army Belvoir RD&E Center
ATTN: STRBE-FMR
Fort Belvoir, VA 22060-5606

Comments or questions on a DOD service's containerization program should be referred to the appropriate service point of contact listed inside the front cover. Comments or questions on particular items of equipment should be referred to the point of contact shown for that program.

NORMAN FERTMAN
Project Director
Logistics Equipment Directorate

Belvoir RD&E Center

1990 Container System Hardware

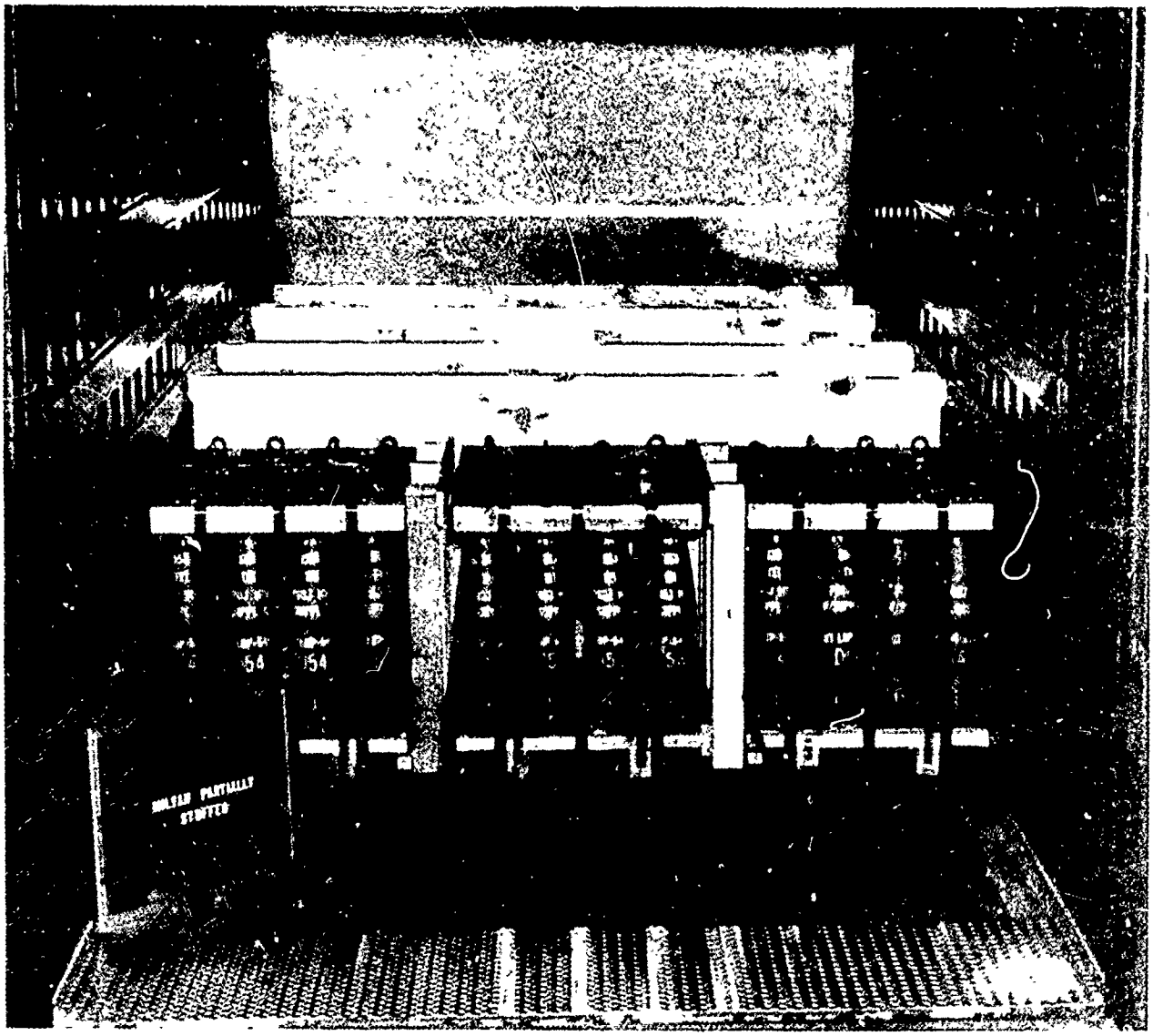
Contents

Cont

PART I

CONTAINERS

MILVAN - Ammunition Restraint



LENGTH: 20 FEET
WIDTH: 8 FEET
HEIGHT: 8 FEET
WEIGHT EMPTY: 5,785 POUNDS
GROSS WEIGHT (DESIGNED): 44,800 POUNDS

MILVAN - Ammunition Restraint

POINT OF CONTACT

P. Barickman
US Army Belvoir RD&E Center, STRBE-FMR
Fort Belvoir, VA 22060-5606
Autovon 354-4490/Commercial (703) 664-4490

ITEM DESCRIPTION

The MILVAN ammunition restraint container is essentially a standard ANSI/International Standards Organization (ISO) container equipped with restraint hardware capable of handling approximately 20 long tons of ammunition. The restraint system consists of eight slotted steel rails permanently installed on each side wall and 25 adjustable crossbars that can be inserted in the slotted rails. Its use at full rated load has been approved by the US Coast Guard and the Association of American Railroads. The MILVAN container is 8 x 8 x 20-feet, and weighs 5,785 pounds including 1,300 pounds for the restraint system. Some 8 x 8.5 x 20-foot containers have been procured and are currently in the Army inventory.

STATUS

The Army procured 4,500 MILVAN ammunition restraint containers and there are 4,241 in the present inventory. A total of 249 MILVANs, each 8 x 8.5 x 20-feet with composite flooring and corrosion resistant steel, were procured. The Army awarded a contract on 30 September 1989 to American Coastal Industries for 930, 8 x 8 x 20-foot containers.

PROGRAM PLAN

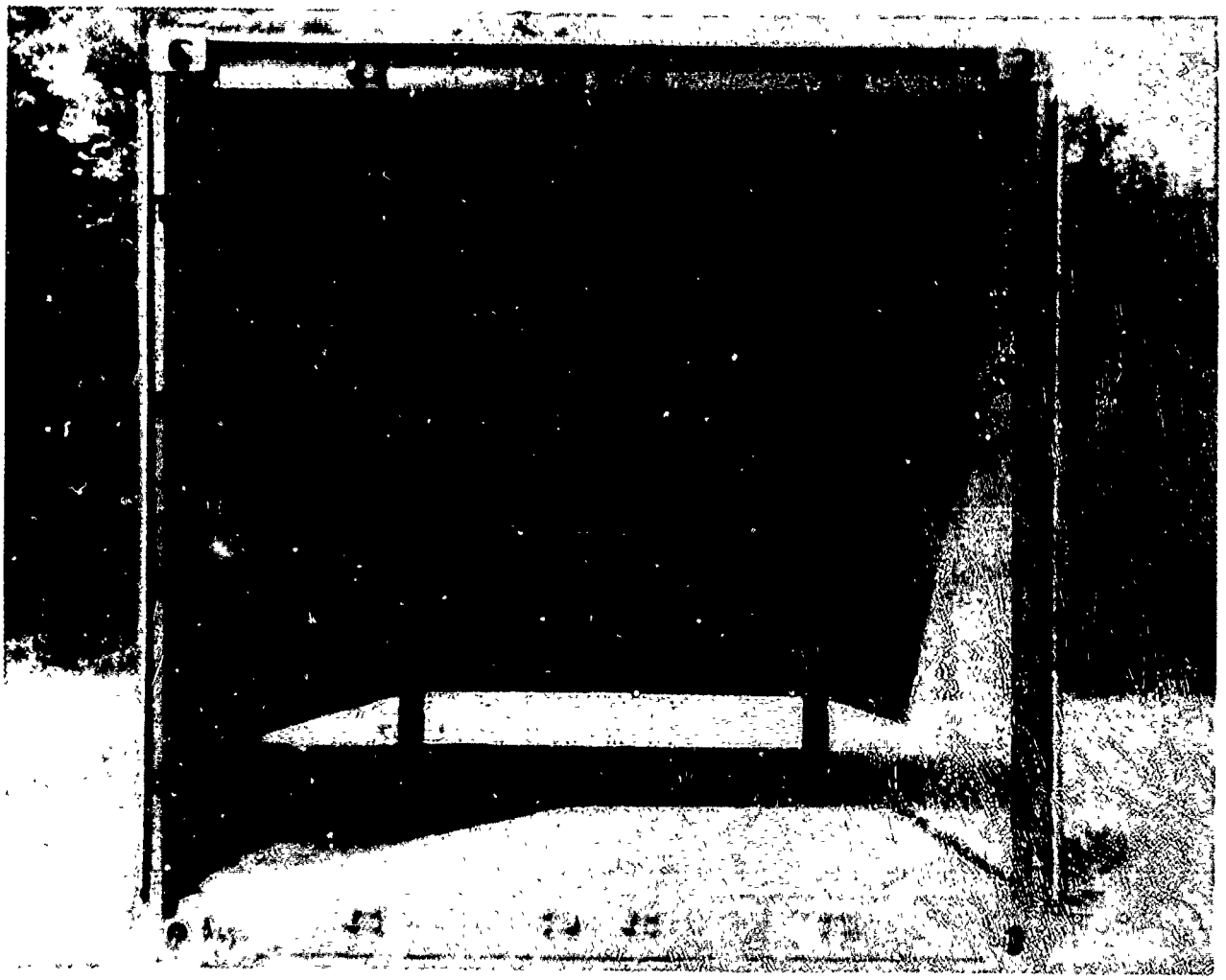
Monitor and provide engineering assistance during the performance period of the contract. The following is the delivery schedule for the containers:

- 211 by 31 March 1991
- 525 between 31 March 1991 to 28 February 1992
- 192 between 28 February 1992 to 30 June 1992

NSNs

8 x 8 x 20: 8115-00-151-9953
8 x 8.5 x 20: 8115-01-220-9527

MILVAN – General Cargo



LENGTH: 20 FEET
WIDTH: 8 FEET
HEIGHT: 8 FEET
VOLUME INSIDE: 1,060 CUBIC FEET
WEIGHT EMPTY: 4,700 POUNDS
GROSS WEIGHT : 44,800 POUNDS

MILVAN - General Cargo

POINT OF CONTACT

P. Barickman
US Army Belvoir RD&E Center, STRBE-FMR
Fort Belvoir, VA 22060-5606
Autovon 354-4490/Commercial (703) 664-4490

ITEM DESCRIPTION

The MILVAN provides a capability of handling up to 20 long tons of general cargo. It is used to transport and temporarily store military cargo. The MILVAN dimensions are 8 x 8 x 20-feet, weighs 4,770 pounds when empty, and has an internal volume of 1,060 cubic feet. The MILVAN is designed to ANSI/ISO standards and procured with a military performance specification. The container is of steel construction with hardwood flooring and the walls are lined with plywood.

STATUS

The Army has procured a total of 2,200 MILVAN general cargo containers. The International Convention for Safe Containers (CSC) was ratified by the United States 3 January 1978. The US Coast Guard, as the implementing agency, issued approval to the Army for the existing MILVAN fleet on 9 November 1978. With depot participation, the container inventory was refurbished and the CSC approval plate mounted beginning in 1978.

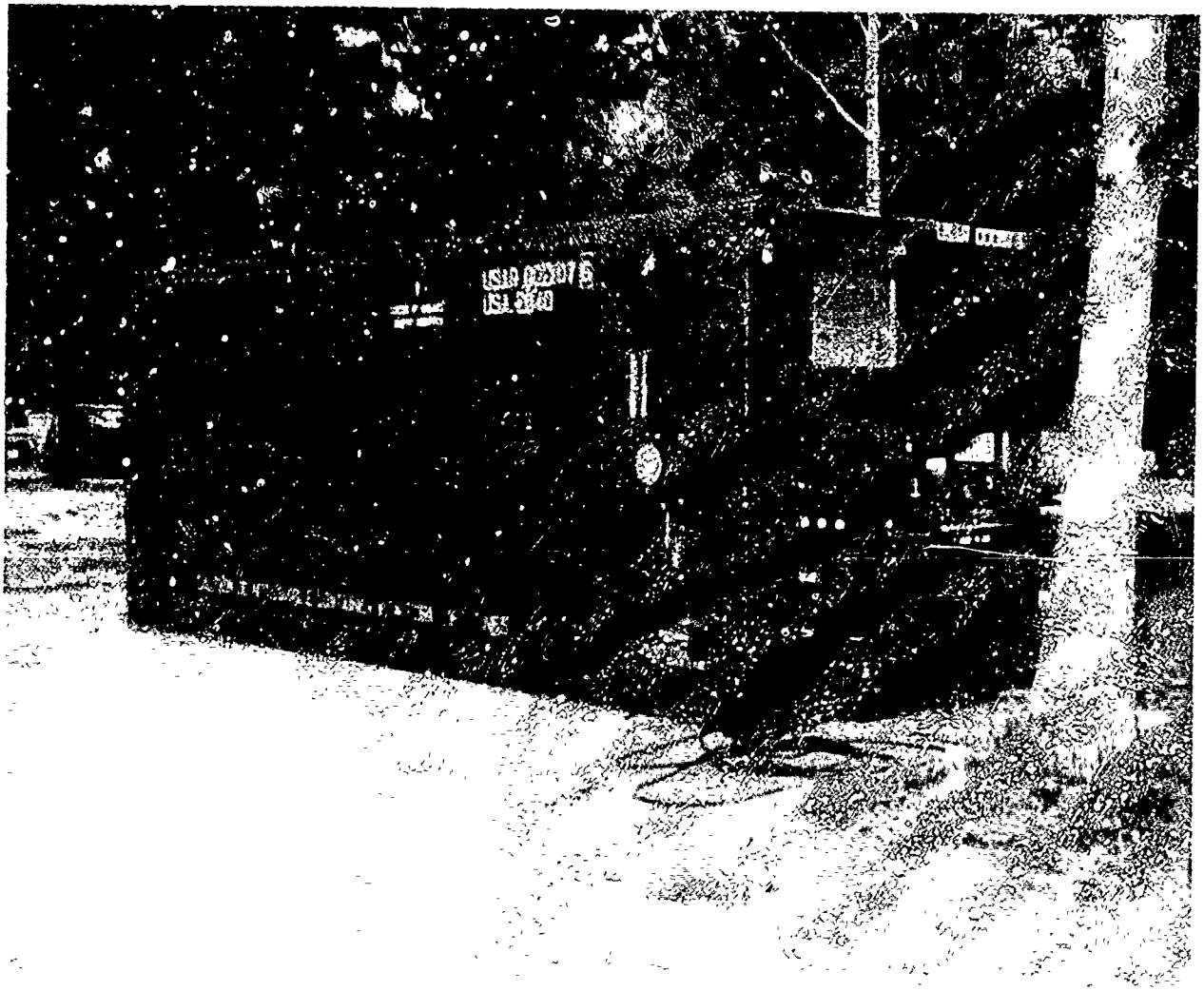
PROGRAM PLAN

There is no current plan to procure additional quantities.

NSN

8115-00-168-2275

Refrigerated Container



LENGTH: 20 FEET
WIDTH: 8 FEET
HEIGHT: 8 FEET
WEIGHT: 8,000 POUNDS
DOOR OPENING HEIGHT: 82 INCHES
DOOR OPENING WIDTH: 89 INCHES

Refrigerated Container

POINT OF CONTACT

P. Barickman
US Army Belvoir RD&E Center, STRBE-FMR
Fort Belvoir, VA 22060-5606
Autovon 354-4490/Commercial (703) 664-4490

ITEM DESCRIPTION

The refrigerated container provides a capability to transport, temporarily store, and distribute temperature-sensitive cargo. The container, including the refrigeration unit, is nominally 8 x 8 x 20 feet and weighs approximately 8,000 pounds. The unit is powered by a military standard 10kW diesel engine generator set or by an external electrical power supply. The refrigerated container is a modified commercial design and procured to a military specification. It meets all ISO requirements for intermodal shipments.

STATUS

A total of 665 containers, including 24 for the US Navy, were purchased and delivered by 1980. Approximately 225 have been deployed to Europe where they are in constant use. The Navy procured an additional 49 units in FY85.

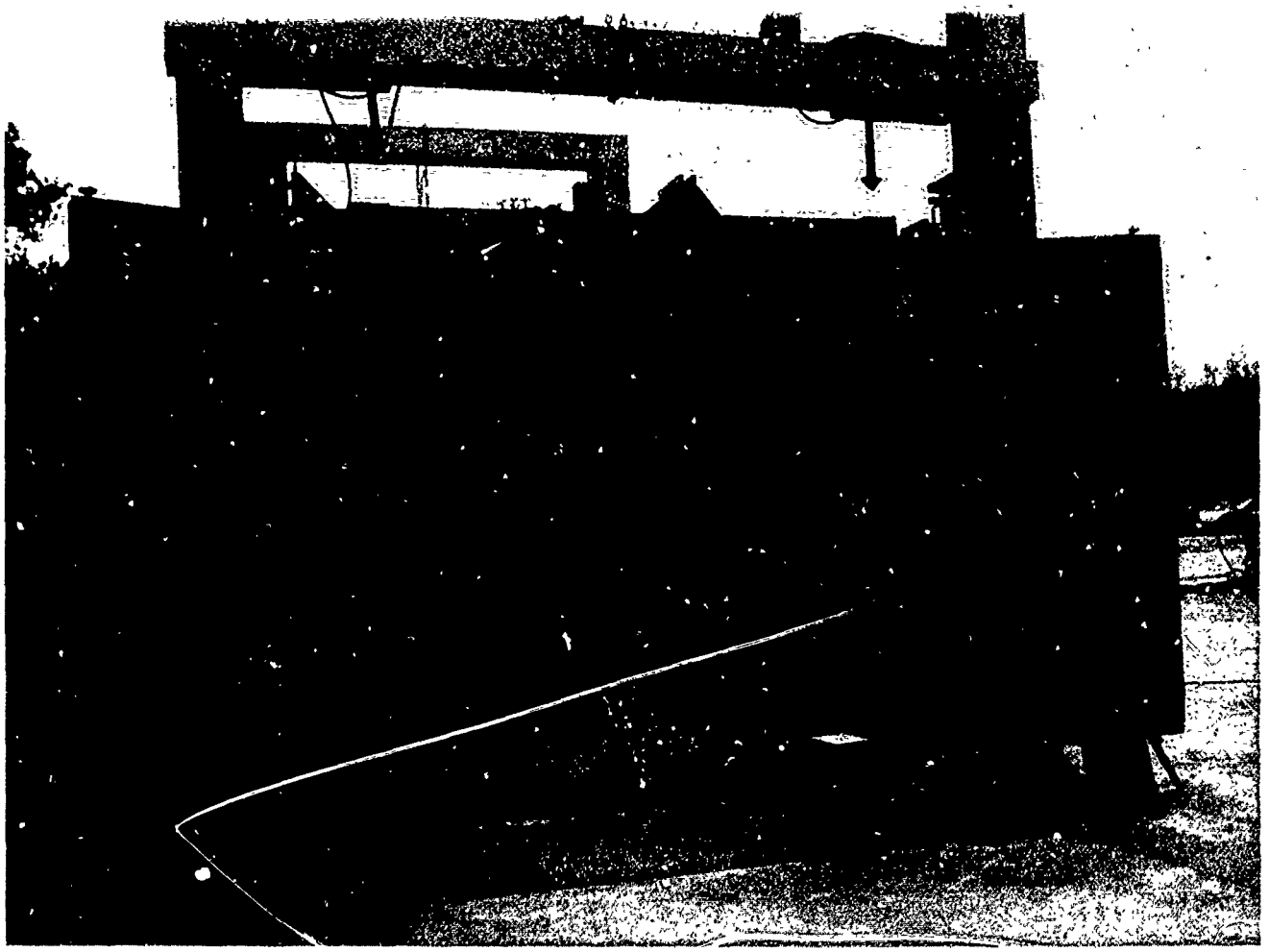
PROGRAM PLAN

There is no current plan to procure additional quantities.

NSN

8115-01-015-7039

Deployable Medical (DEPMED) Containers



LENGTH: 20 FEET
WIDTH: 8 FEET
HEIGHT: 8 FEET
TARE WEIGHT: 5,150 POUNDS
GROSS WEIGHT: 44,800 POUNDS

Deployable Medical (DEPMED) Containers

POINT OF CONTACT

T. Lavin
US Army Troop Support Command, AMSTR-WH
4300 Goodfellow Blvd.
St. Louis, MO 63120-1798
Autovon 693-2667/Commercial (314) 263-2667

ITEM DESCRIPTION

The DEPMED containers will be used in direct support of the Surgeon General's fielding of the Deployable Medical Systems. They will be used for shipping and storage of components for various operating rooms, medical support, and laboratories which comprise the Deployable Medical Systems. The DEPMED Container is an 8 x 8 x 20-foot reusable container with both end and side doors. The DEPMED container is designed to ANSI/ISO standards and is produced from a military performance specification. The container is constructed of steel, with hardwood flooring, and interior walls lined with plywood.

STATUS

A contract was awarded to Mid-States Metal Lines, Grandview, MO, for 5,570 containers on 11 May 1988.

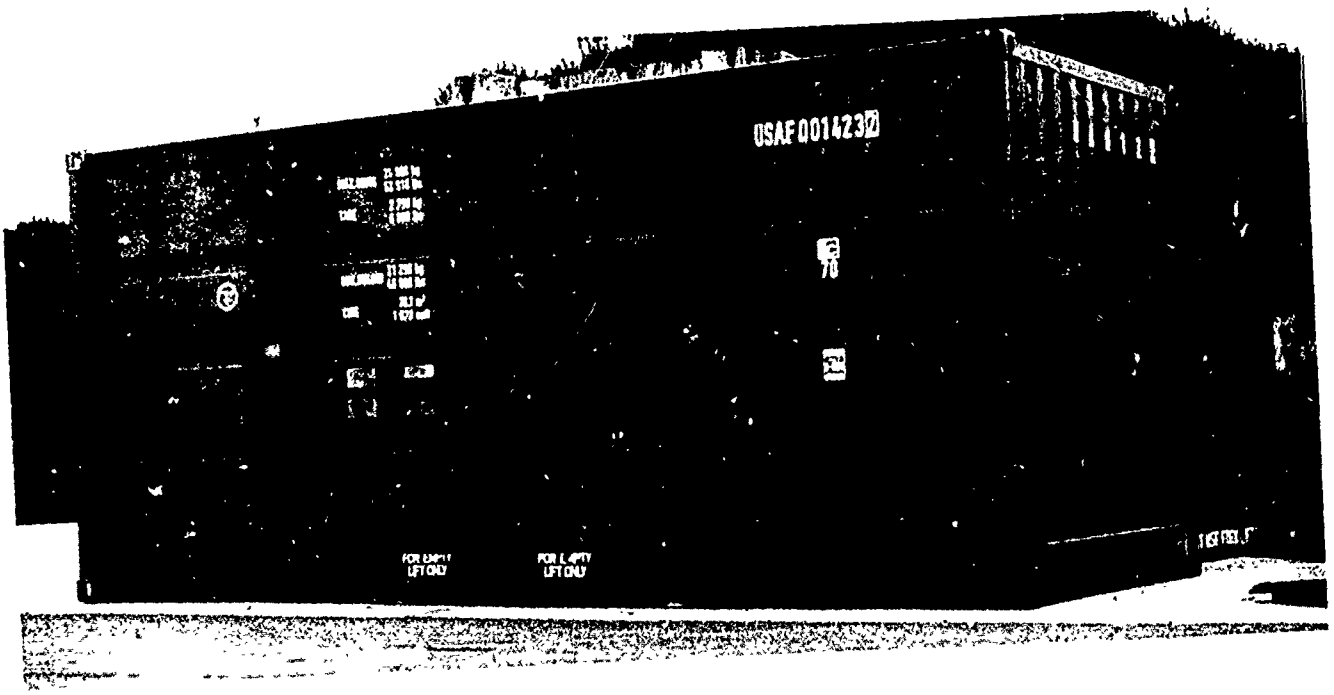
PROGRAM PLAN

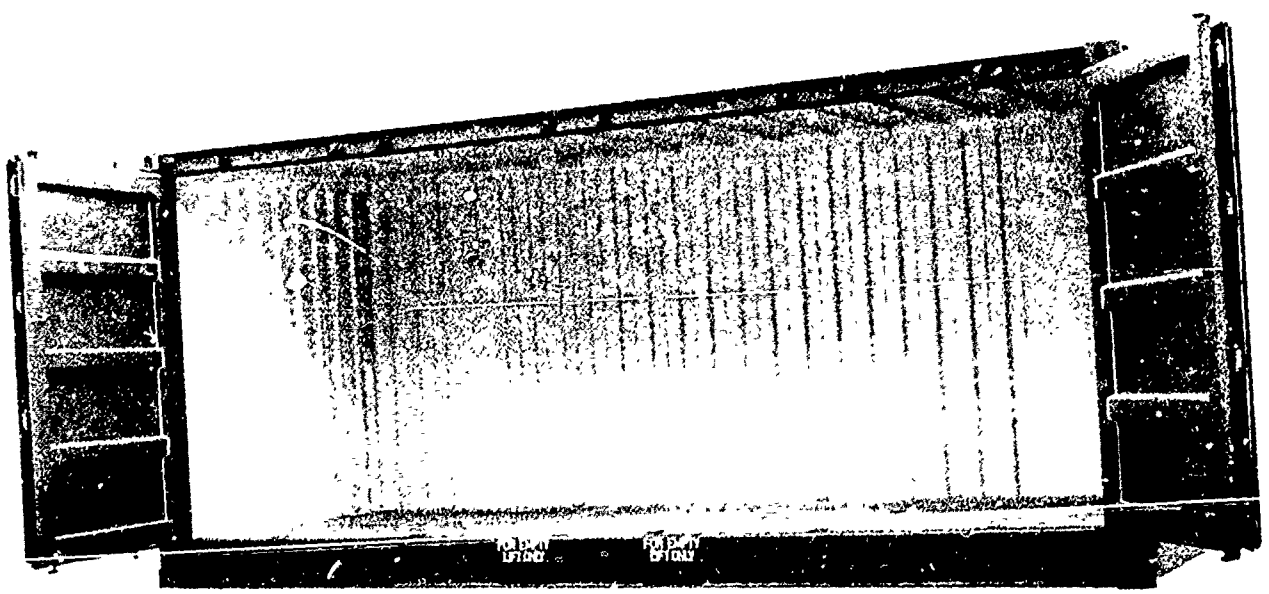
Receive and field the DEPMED containers over the next several years.

NSN

8115-01-241-7524

20-Foot ISO Side-Opening Container





20-Foot ISO Side-Opening Container

POINT OF CONTACT

MAJ T. Baltes
HQ, US Air Force Europe, LGWR
Ramstein AB, GE, APO New York 09094-5000
Autovon 480-6688/Commercial 011-49-6371-47-6688

ITEM DESCRIPTION

The 20-foot ISO side-opening container is an ISO container with two double doors located on one side of the container which allows unobstructed access to its contents. The one side-opening containers are used to store and transport munitions in Europe and do not have end doors. The side-opening container was selected for ease in loading and unloading of munitions.

STATUS

The Armament Division (AD) leased 10 side-opening ISO containers of three designs:

- One side door, one end door
- Ventilated; full side access doors, one end door
- Side Doors, both sides; one end door

Three containers of each design were shipped to USAFE, PACAF, and MAC for operational testing and evaluation during FY86. Due to the urgent need to improve munitions storage and handling capability in USAFE, the process of procuring side-opening containers was initiated before the testing was complete. In FY86, HQ USAFE released a request for proposal (RFP) to purchase 20-foot side-opening ISO containers. A total of 1,200 side-opening containers were procured by USAFE and are being used to store and transport munitions.

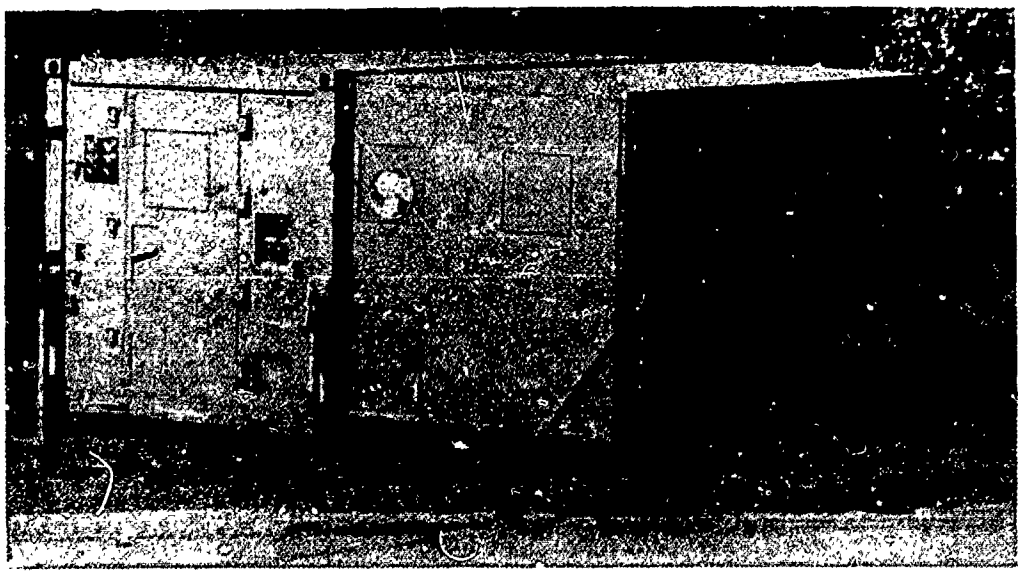
PROGRAM PLAN

Continue to support the fielded containers.

NSNs

2 Fork Pockets: 8145-L900411D
4 Fork Pockets: 8145-L900412D

ISO Tactical Shelter



ISO Tactical Shelter

POINT OF CONTACT

A. Murphy
US Army Natick RD&E Center (STRNC-UST)
Natick, MA 01760-5017
Autovon 256-5246/Commercial (508) 651-5246

ITEM DESCRIPTION

An ISO Tactical Shelter is a presized, transportable structure designed for a functional requirement and provides a live-in, work-in or container capability. This structure can be either expandable or non-expandable and conforms to applicable ANSI/ISO container standards. All services are increasing their utilization of the shelter concept, and the impact of shelters on the transportation and materiel handling system will become more significant in coming years. A standard family of 20-foot rigid wall ISO shelters has been developed by the US Army Natick Research, Development and Engineering Center for DOD use. The shelter family includes three types:

- Non-Expandable Shelter, Tactical (11,100 pound payload)
- One-Side Expandable Shelter, Tactical (9,700 pound payload)
- Two-Side Expandable Shelter, Tactical (8,300 pound payload)

STATUS

ISO Tactical Shelters have completed development and a Technical Data Package is finalized. The First Production contract was awarded on 27 April 1984 for 762 shelters with an FY85 option for 200% more. Initial production deliveries began in December 1985. A total of 1,739 shelters were delivered under this contract with delivery completed in May 1989. The following quantities represent standard ISO shelters procured for specific new Navy, Air Force, and Army ISO sheltered systems under the 1984 contract:

	Quantity
ISO Tactical Shelter (Non-Expandable)	7
ISO Tactical Shelter (One-Side Expandable)	1,035
ISO Tactical Shelter (Two-Side Expandable)	697

In August 1988, a contract was awarded for 722 Army Standard Family ISO Tactical Shelters with a 100% option. Delivery commended during June 1989.

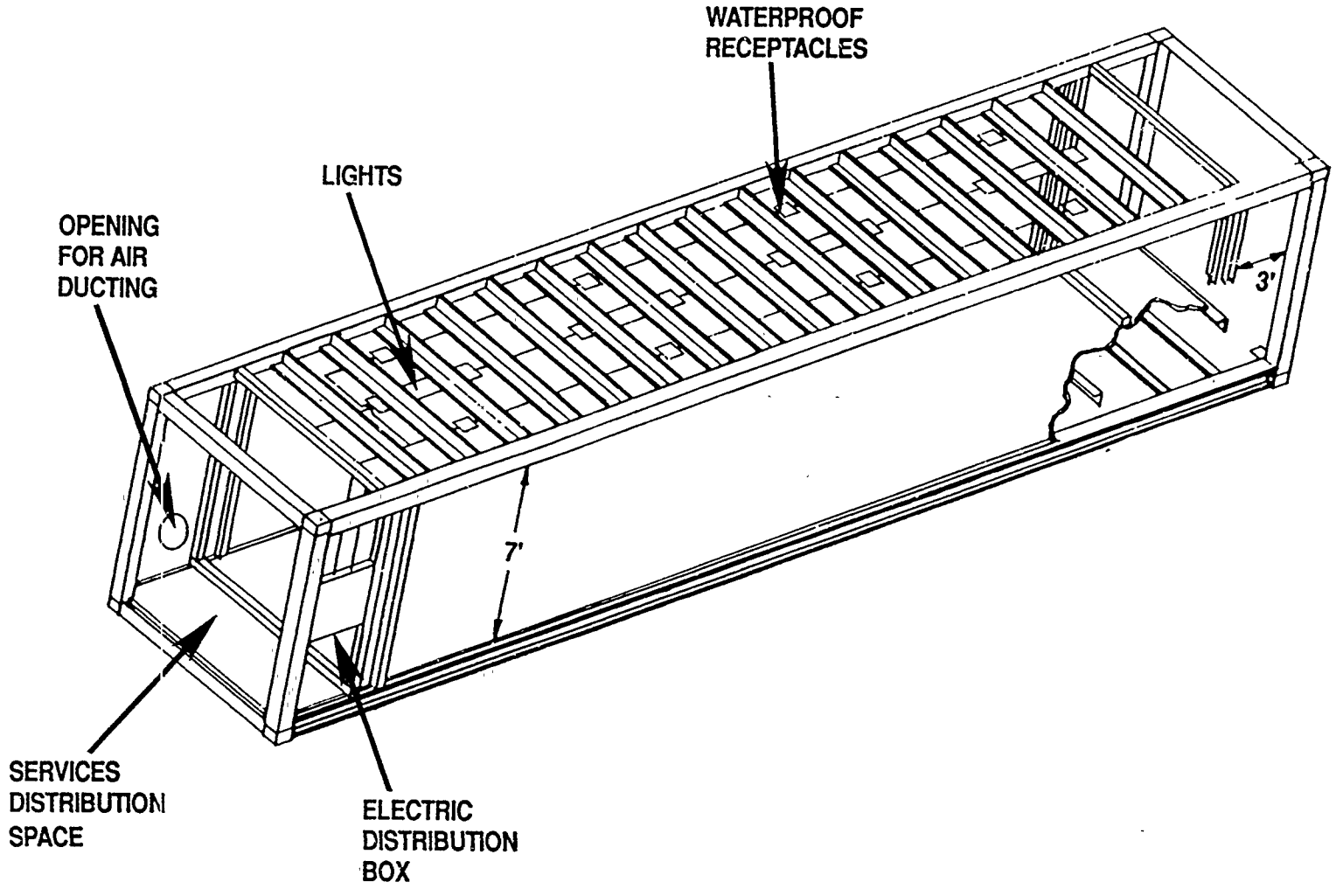
PROGRAM PLAN

Monitor contract and field ISO Tactical Shelters.

NSNs

Non-Expandable: 5411-01-136-9837
One-Side Expandable: 5411-01-124-1377
Two-Side Expandable: 5411-01-136-9838

Basic Merchant Ship Naval Augmentation Program (MSNAP) Module



BASIC 40 FT MODULE STRUCTURE

Basic Merchant Ship Naval Augmentation Program (MSNAP) Module

POINTS OF CONTACT

M. Fink
Naval Sea Systems Command, PMS 377 K
Washington, DC 20362-5101
Autovon 332-4834/Commercial (703) 602-4834

B. Nolte
Naval Coastal Systems Center, Code 3320
Panama City, FL 32407-5000
Autovon 436-4489/Commercial (904) 234-4489

ITEM DESCRIPTION

The 8 x 8.5 x 40 foot Basic MSNAP Module is an RDT&E development effort. The goal is an ISO-compatible structure which can readily be configured to provide a live-in or work-in shelter within the hold spaces of a containership, breakbulk ship or RO/RO ship. The module features a 3-foot utility compartment at either end. It can be readily outfitted with overhead lighting; a heating/ cooling unit; ventilation ducting; reinforced decking; and connections for electrical, plumbing, and other utilities. The structure is the basis for workshop modules of the MSNAP Modular Repair System (MMRS), and for a variety of below-deck modules of the MSNAP Habitability and Utility Support System (HUSS).

STATUS

Design of the Basic MSNAP Module was completed in FY86.

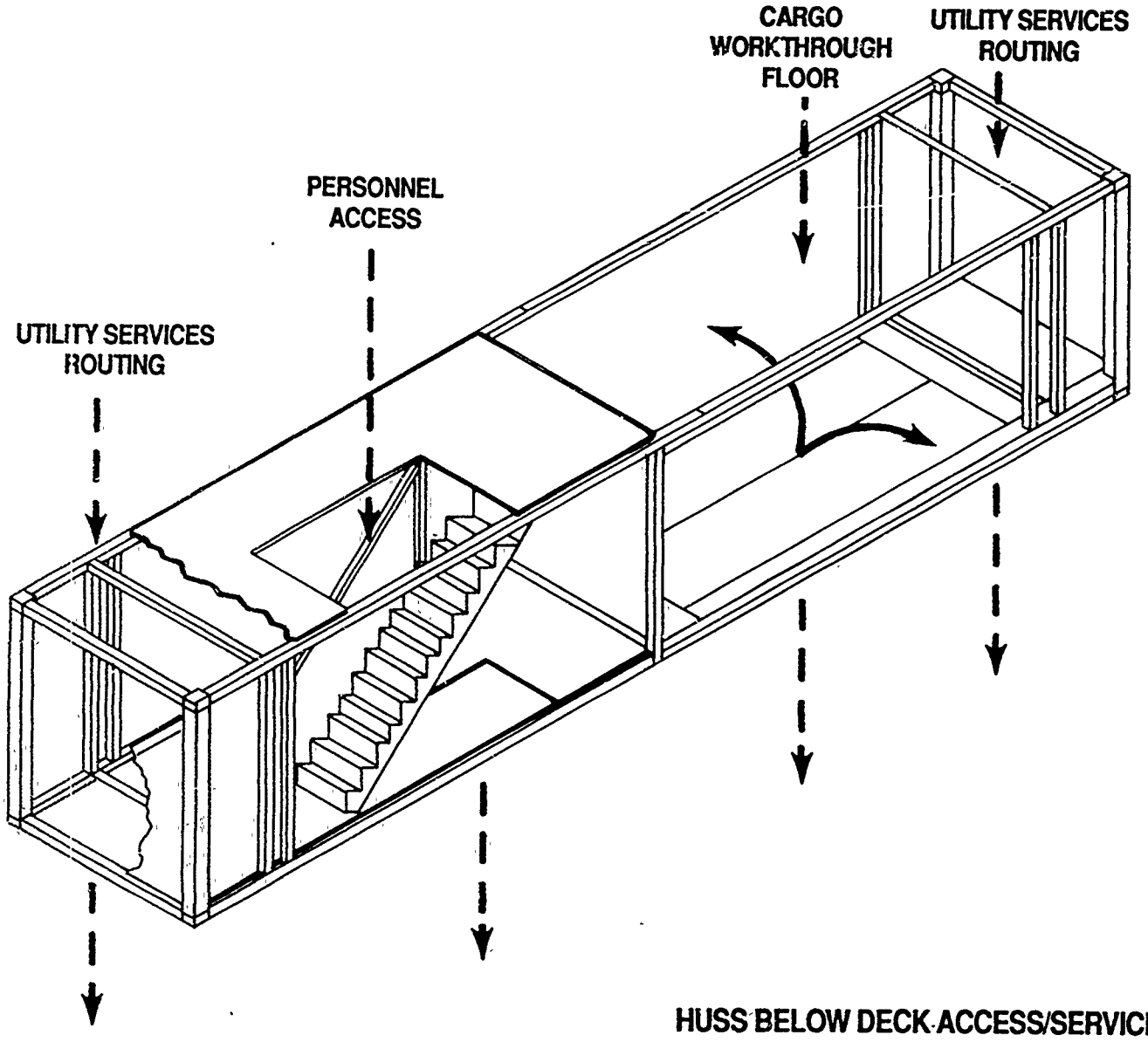
PROGRAM PLAN

The MSNAP is currently unfunded and no activity is planned.

NSN

Not assigned.

Habitability and Utility Support System (HUSS)



HUSS BELOW DECK ACCESS/SERVICE MODULE

Habitability and Utility Support System (HUSS)

POINTS OF CONTACT

M. Fink
Naval Sea Systems Command, PMS 377 K
Washington, DC 20362-5101
Autovon 332-4834/Commercial (703) 602-4834

B. Nolte
Naval Coastal Systems Center, Code 3320
Panama City, FL 32407-5000
Autovon 436-4489/Commercial (904) 234-4489

ITEM DESCRIPTION

HUSS is a system of personnel- and utility-oriented containerized modules which can be selectively installed and employed above deck and in hold spaces of Strategic Sealift containerships. The HUSS system provides integrated support to other Merchant Ship Naval Augmentation Program (MSNAP) systems installed and operating in a fleet augmentation role. The majority of the HUSS modules will utilize the 40-foot Basic MSNAP Module design. Above-deck module functions will include heating, ventilation, and air conditioning; electrical power generation; system fuel storage; and personnel and equipment access for below-deck spaces. Initial below-deck module functions being designed include personnel and equipment access to all hold levels and utility distribution. Other functions being considered include berthing, head and shower, waste management, galley, messing, sickbay, laundry, administrative, recreation, and storage support.

STATUS

Preliminary design of HUSS access modules was completed in FY86.

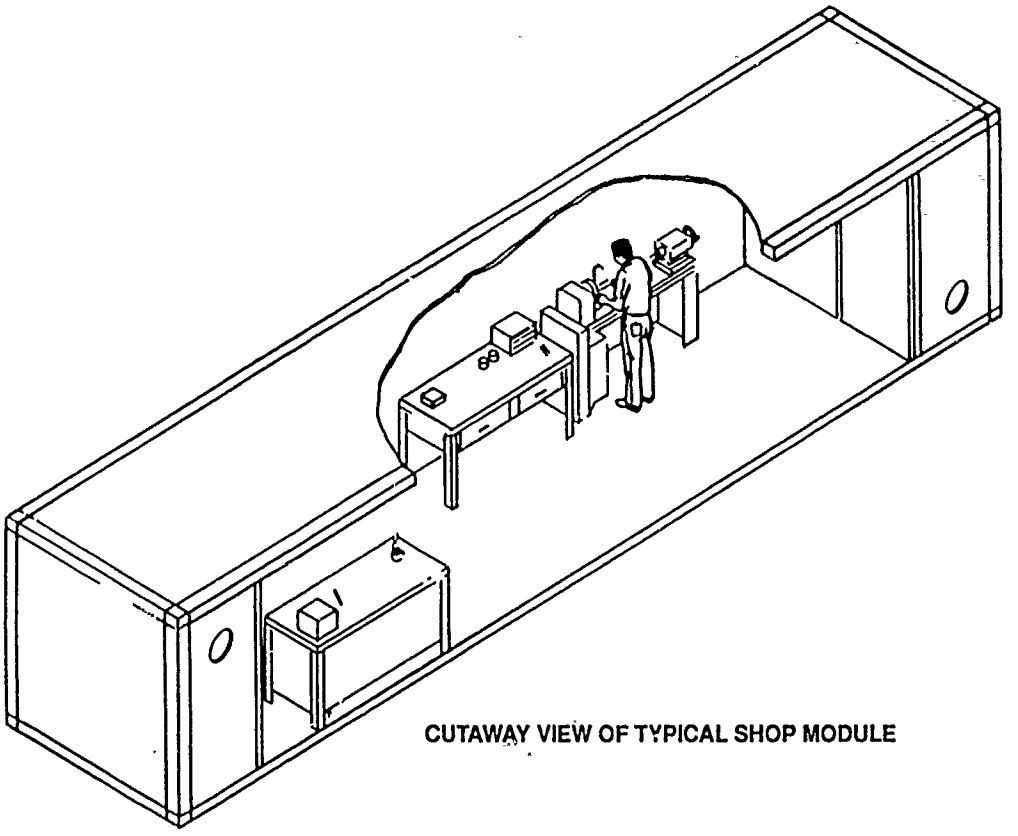
PROGRAM PLAN

The MSNAP is currently unfunded and no activity is planned.

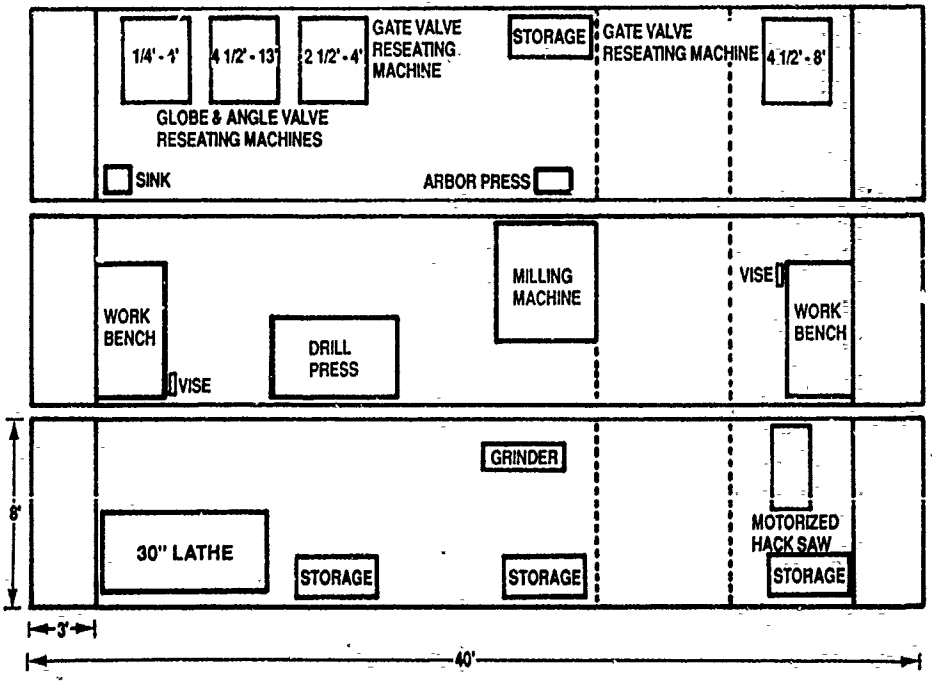
NSN

Not assigned.

Modular Mobile Repair System (MMRS)



CUTAWAY VIEW OF TYPICAL SHOP MODULE



MACHINE SHOP COMPLEX

Modular Mobile Repair System (MMRS)

POINTS OF CONTACT

M. Fink
Naval Sea Systems Command, PMS 377 K
Washington, DC 20362-5101
Autovon 332-4834/Commercial (703) 602-4834

B. Nolte
Naval Coastal Systems Center, Code 3320
Panama City, FL 32407-5000
Autovon 436-4489/Commercial (904) 234-4489

ITEM DESCRIPTION

The MMRS is a system of modular workshops which can be installed and operated in Strategic Sealift merchant ships to provide fleet augmentation support. Shop equipment will be installed in the Basic MSNAP Module. Deployment will provide workshop suites comprised of one or more 40-foot modules. These modules in conjunction with selected Habitability and Utility Support System (HUSS) modules, make up the overall, multi-level MMRS complex.

STATUS

MMRS design work commenced at NAVCOASTSYSCEN under the Merchant Ship Naval Augmentation Program (MSNAP) in FY85. Detailed design and specification of the first advanced development model was completed in early FY87.

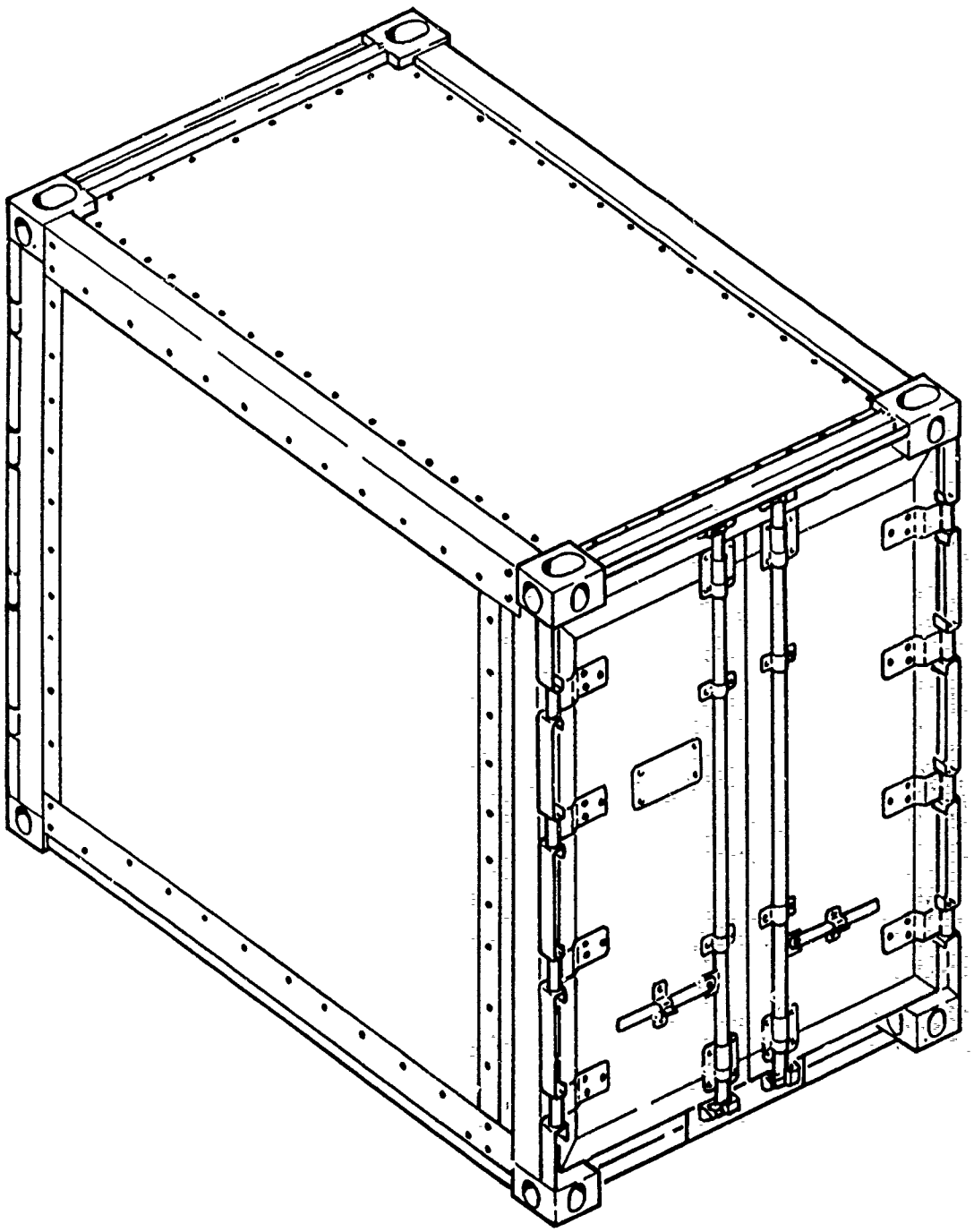
PROGRAM PLAN

The MSNAP is currently unfunded and no activity is planned.

NSN

Not assigned.

Quadruple Container (QUADCON)



LENGTH: 96 INCHES
WIDTH: 57½ INCHES
HEIGHT: 8? INCHES
CARGO CAPACITY: 8,000 POUNDS

Quadruple Container (QUADCON)

POINT OF CONTACT

L. Crivello
CG, Marine Corps RD&A Command, Code SSCGP
Washington, DC 20380-0001
Autovon 226-1064/Commercial (202) 696-1064

ITEM DESCRIPTION

The QUADCON is an 82 x 57.5 x 96 inch lockable, weatherproof, reusable, prefabricated container with a cargo capacity of 8,000 pounds. The QUADCON has a structural steel welded frame; top sides and door panels of plywood coated with a plastic laminate; and a floor of high-density plywood covered on both sides with sheet steel. It has ISO corner fittings for lifting and restraint, and for coupling QUADCONs into arrays of up to four units. The QUADCON has a tineway base to allow four-way forklift entry. An array of four QUADCONs is nearly equivalent in volume to one 8 x 8 x 20 foot ISO container and is compatible with the 20-foot cell guides of a containership.

STATUS

A production contract has been awarded to produce up to 45% of the Marine Corps Acquisition Objective with the configuration described above. The production contract is a base year contract with options for up to 4 additional years. A redesign developmental contract was awarded to incorporate changes identified by Marine Corps Units during field evaluations which were completed in May 1987. The new design will provide the additional 55% of the Acquisition Objective.

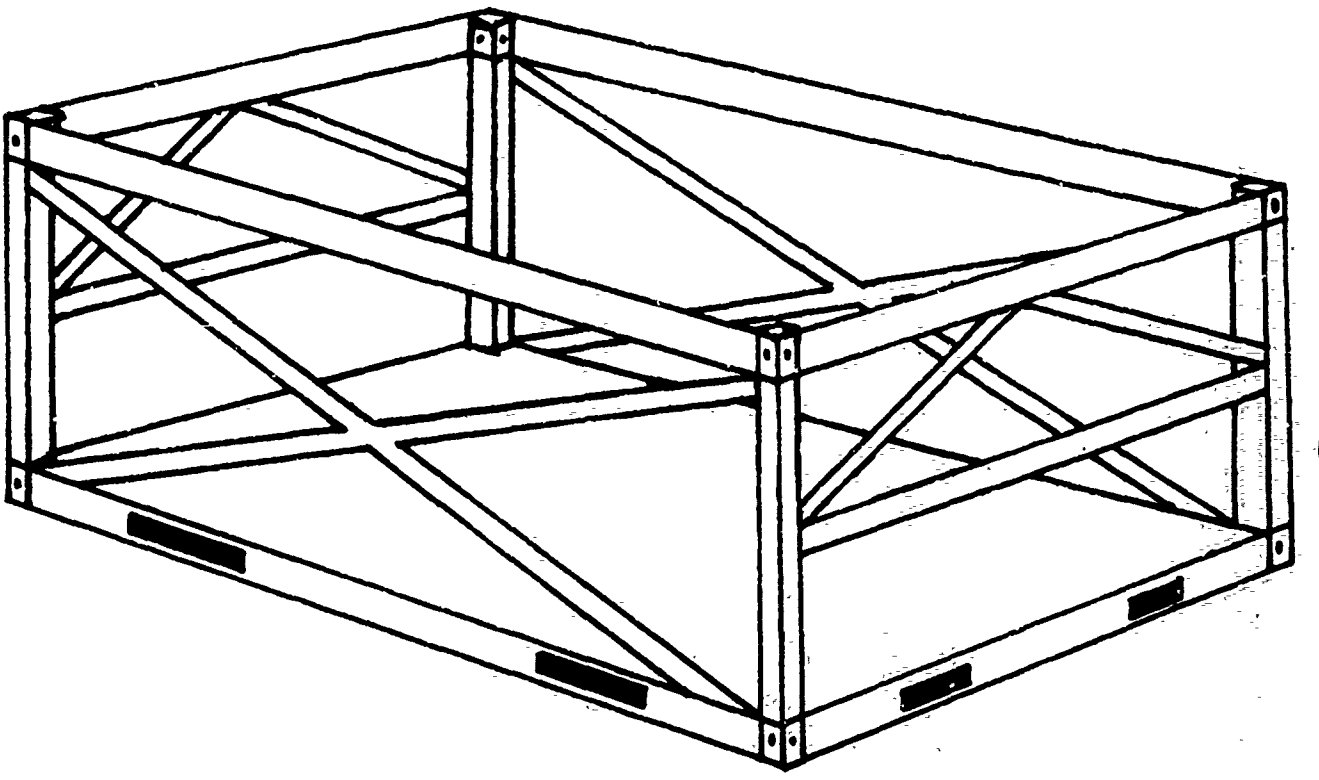
PROGRAM PLAN

An additional production contract will be awarded in FY92 for a 5-year effort to produce the enhanced design.

NSN

8115-01-194-4017

Shipping Frame, 4 x $6^{2}/_{3}$ x 8 Foot



LENGTH: $6^{2}/_{3}$ FEET
WIDTH: 8 FEET
HEIGHT: 4 FEET
ARRAYED CONFIGURATION: 8 FEET x 8 FEET x 20 FEET

Shipping Frame, 4 x 6 2/3 x 8 Foot

POINT OF CONTACT

L. Crivello
CG, Marine Corps RD&A Command, Code SSCGP
Washington, DC 20380-0001
Autovon 226-1064/Commercial (202) 696-1064

ITEM DESCRIPTION

Reusable open top cargo carrier with four-way forklift handling capability with ISO standard corner fittings. Can be arrayed up to six, forming an 8 x 8 x 20 foot configuration to fit the cell of a containership. Capability objective is to provide an open container of intermediate size compatible with US Navy amphibious ships and the Merchant Fleet. The frame is used as an integral component of SIXCON fuel/water storage and pump modules though it could be used for general cargo and organizational property.

STATUS

A procurement contract for 402 shipping frames was conducted and the shipping frames are now in use with the fuel and water modules.

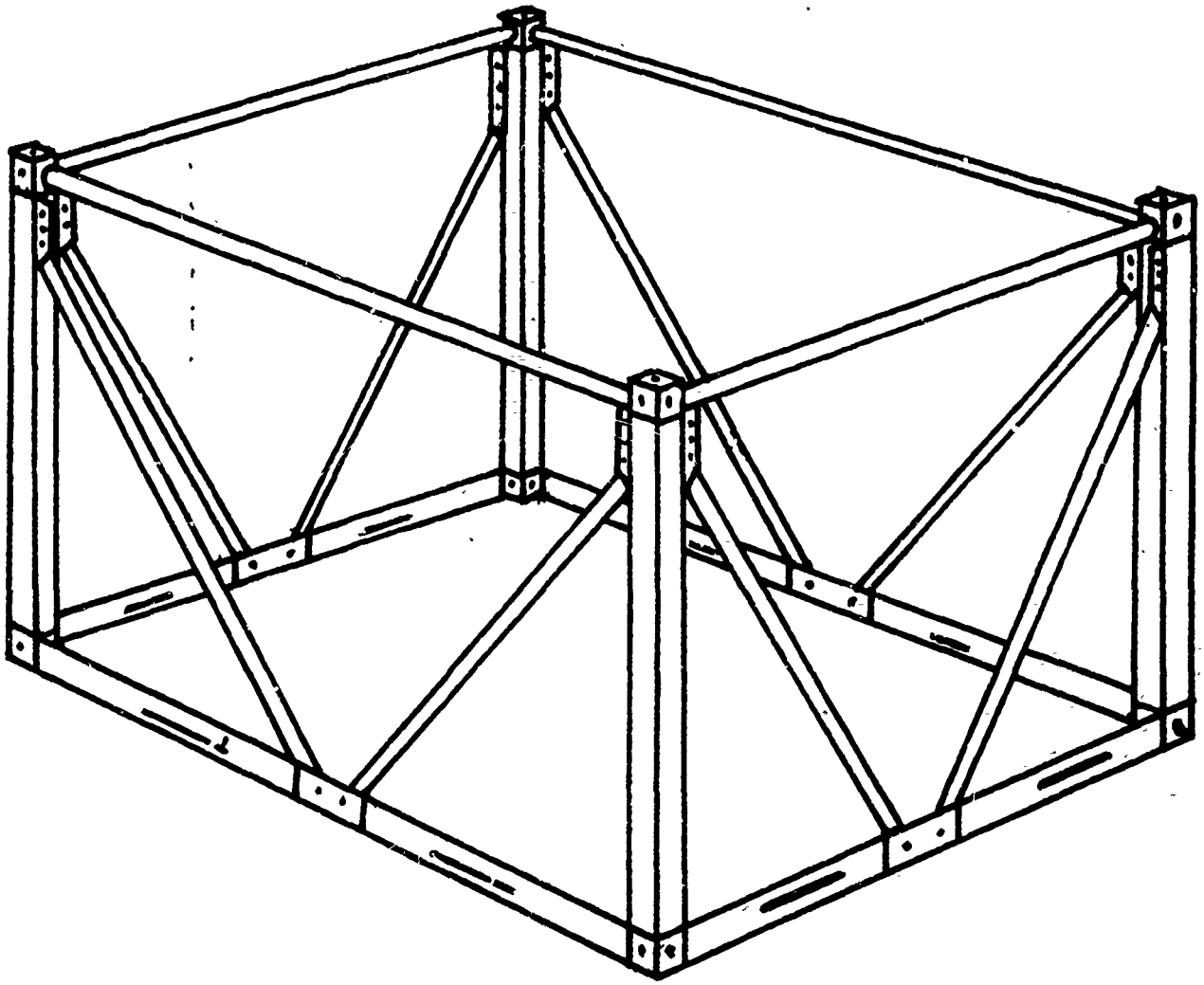
PROGRAM PLAN

There are no plans for future procurements since the item was for one unique application.

NSN

Not applicable.

Shipping Frame, 8 x 8 x 10 Foot



LENGTH: 10 FEET
WIDTH: 8 FEET
HEIGHT: 4 FEET
ARRAYED CONFIGURATION: 8 FEET x 8 FEET x 20 FEET

Shipping Frame, 8 x 8 x 10 Foot

POINT OF CONTACT

L. Crivello
CG, Marine Corps RD&A Command, Code SSCGP
Washington, DC 20380-0001
Autovon 226-1064/Commercial (202) 696-1064

ITEM DESCRIPTION

An open top cargo carrier of steel construction which features a four-way forklift handling capability and standard ISO corner fittings. An array of two frames forms an 8 x 8 x 20 foot configuration and fits the 20-foot cells of a containership. The frame is used to support the mounting and movement of the reverse osmosis water purification unit (ROWPU).

STATUS

Approved for service use was obtained in May 1981. An Army contract was awarded 30 September 1983 for the procurement of 496 frames which satisfied Marine Corps requirements.

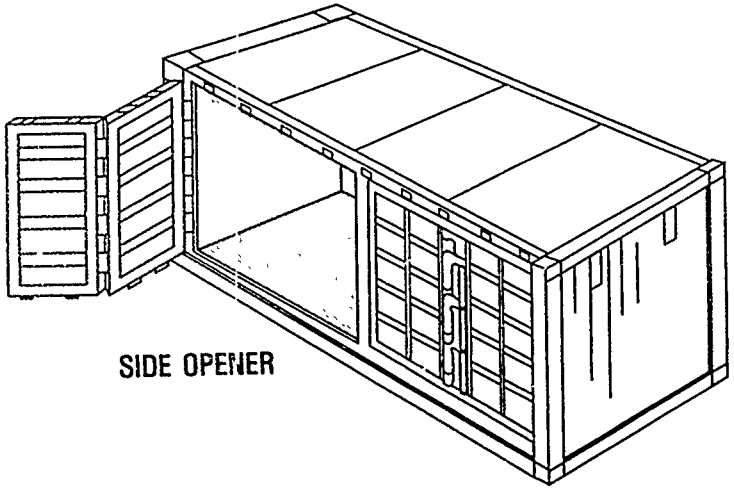
PROGRAM PLAN

There are no plans for future procurements since the item was for one unique application.

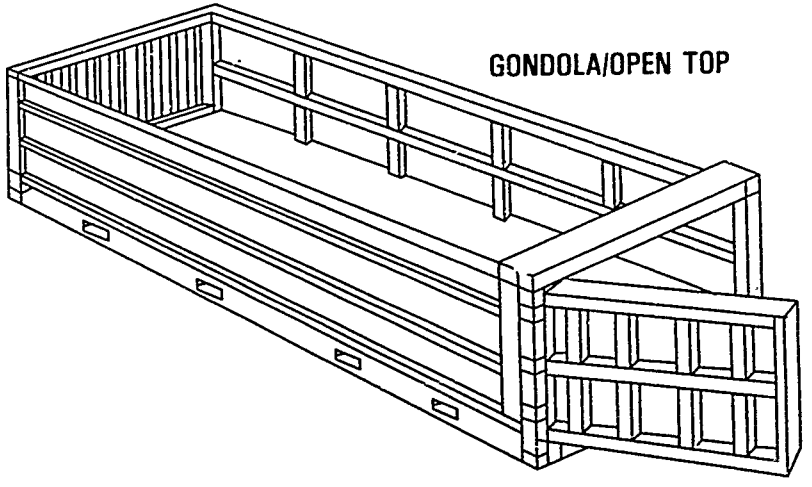
NSN

Not applicable.

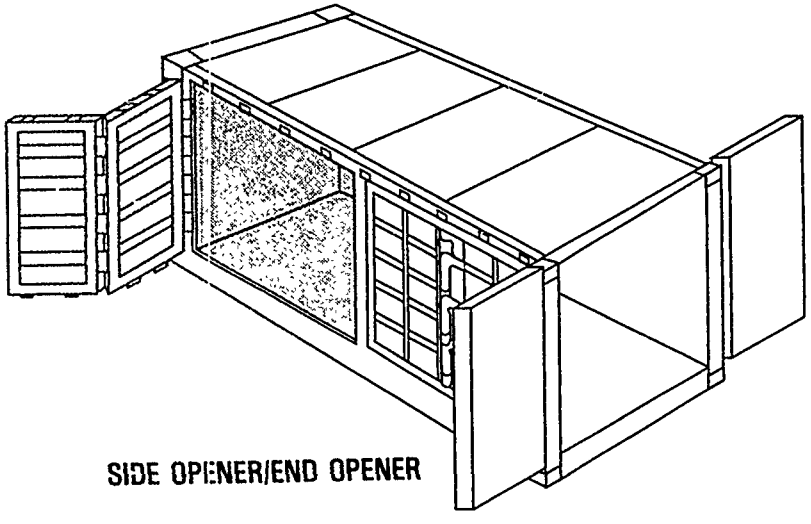
Ammunition Containerization Evaluation
(Follow-on Efforts)



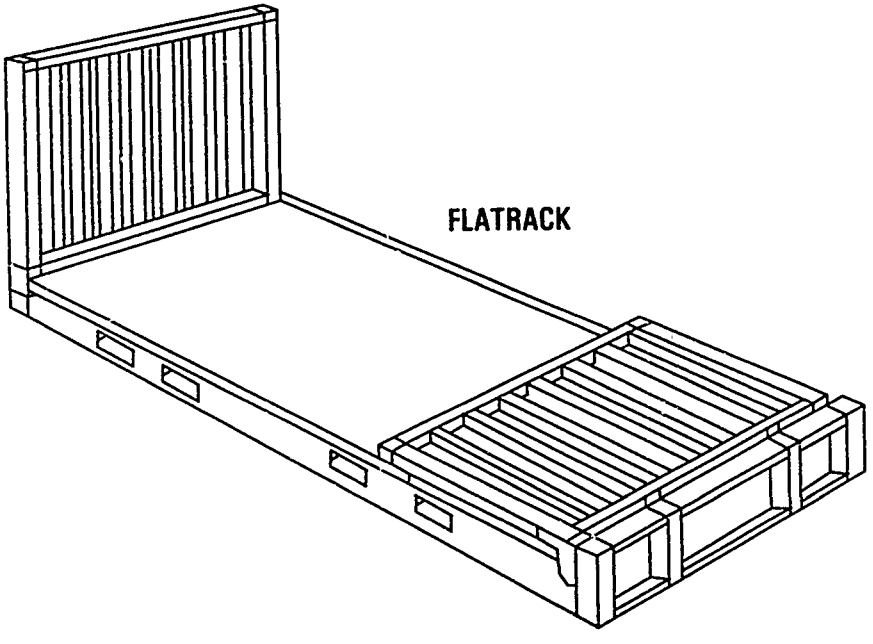
SIDE OPENER



GONDOLA/OPEN TOP



SIDE OPENER/END OPENER



FLATRACK

Ammunition Containerization Evaluation (Follow-on Efforts)

POINT OF CONTACT

D. Chesnulovitch
PM-AMMOLOG, AMCPM-AL
Picatinny Arsenal, NJ 07806-5000
Autovon 880-4737/Commercial (201) 724-4737

ITEM DESCRIPTION

In conjunction with our TRADOC counterpart, the Munitions Systems Manager (MSM) and representatives from several organizations (USADACS, BRDEC, MTMC-TEA, OMMCS, HEL, JCCO), PM-AMMOLOG initiated a three-part container program to achieve the following objectives:

- Demonstrate the utility of special and standard ANSI/ISO containers in the AMMOLOG system as part of the present peacetime resupply operations.
- Quantify commercial container availability.
- Determine blocking and bracing alternatives.

STATUS

Container Demonstration: Completed in November 1987. Test results indicated all container types showed promise, especially the side opener. Tailoring the container munitions families is the key.

Commercial Container Survey: This survey, performed by the Department of Transportation, highlighted the need for common inspection criteria for all container users. Initiated a pilot program with AMCCOM, MICOM, and MTMC to utilize commercial containers as a supplement to the ammunition restraint MILLVAN fleet.

Blocking and Bracing Effort: Identified two high payoff solutions—the Load and Roll Pallet (LRP) and TYGARD (a tape system). Developed a matrix listing ammunition types, a container of choice, blocking and bracing procedures, and the benefits/savings to be realized.

PROGRAM PLAN

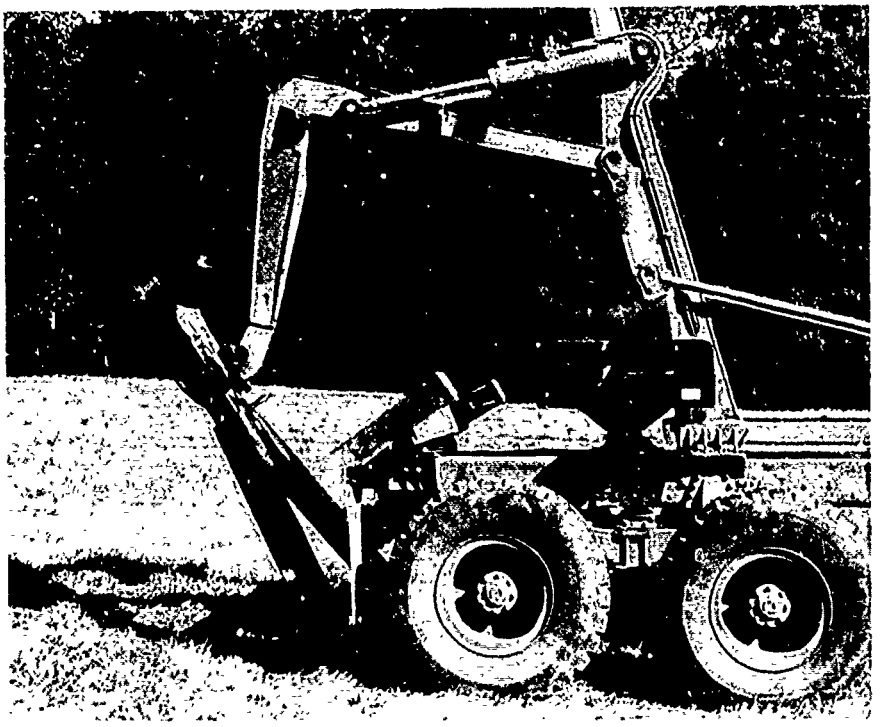
PM-AMMOLOG will initiate program efforts as follows:

- Utilize 300 commercial containers during FY90 as a supplement to the ammunition restraint MILVAN fleet.
- Develop MILVAN/PLS performance specification.
- Develop one inspection criteria for all containers.
- Develop a joint service Strategic Transportation Initiative to address consolidated ammunition through past deficiencies for DOD.

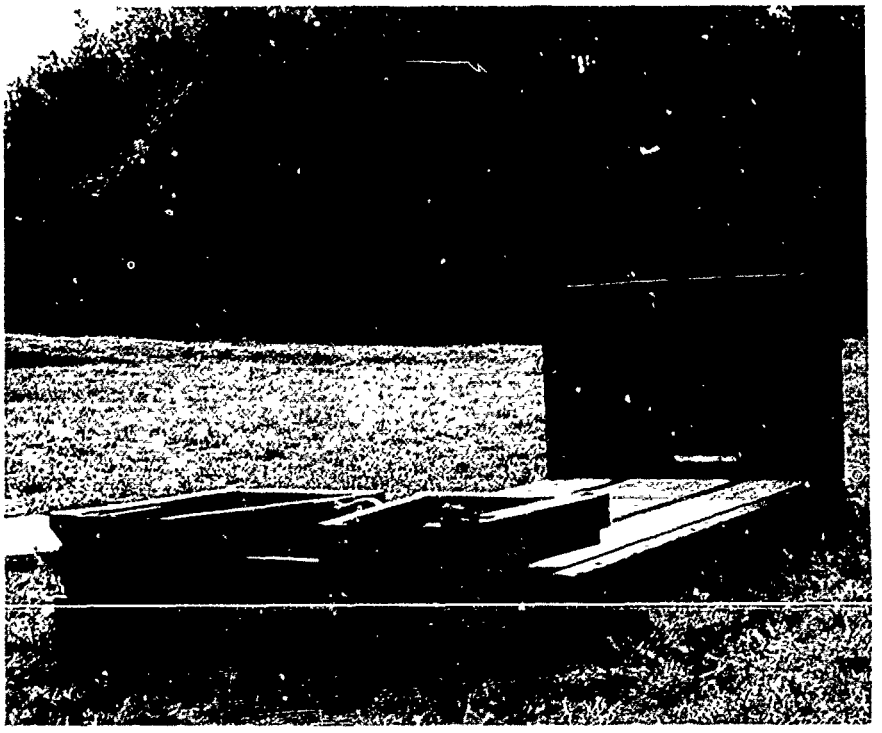
NSN

Not assigned.

Palletized Loading System (PLS) Logistics



HOOKLIFT INTERFACE KIT (HIK)



AMMUNITION CONTAINER (AMCON)

Palletized Loading System (PLS) Logistics

POINT OF CONTACT

D. Chesnulovitch
PM-AMMOLOG, AMCPM-AL
Picatinny Arsenal, NJ 07806-5000
Autovon 880-4737/Commercial (201) 724-4737

ITEM DESCRIPTION

The present ammunition logistics system in the theater of operations must overcome material handling and transportation shortfalls associated with the delivery of Class V (ammunition) materials to combat units. Currently, two different methods are being examined to meet this need. The concept of PLS Logistics is to demonstrate a direct connectivity between PLS and strategic transportation assets.

The first concept, Hooklift Interface Kit (HIK), is a device that enables the PLS truck to lift, transport, and download any commercial 8 x 20 foot container directly. HIK is made up of two components: an X-frame that attaches to the hook on the load handling system, and a support frame mounted to the rear of the truck. Follow-on prototypes will give the PLS truck driver the flexibility to pick up an ISO container directly with the X-frame or drop the X-frame and pick up any NATO, A-framed flatrack.

The second concept, Ammunition Container (AMCON), is a commercial ISO flatrack design, modified to interface directly with PLS. With this design, AMCONs can be loaded in CONUS and shipped all the way to the weapon system on the battlefield. Future versions of AMCON will be directly compatible with all USAF cargo aircraft as well as 25K and 40K USAF aircraft loaders.

STATUS

A Phase I demonstration of the HIK and AMCON were completed during December 1988. A Phase II contract award for the HIK and AMCON was made in April 1989 with hardware expected 2QFY90.

PROGRAM PLAN

USADACS test and validate HIK and AMCON 2QFY90. Aircraft compatibility testing and evaluation of the aircraft compatible AMCON is scheduled for 4QFY90 with an Aircraft Mockup Demo scheduled for 1QFY91.

NSN

Not assigned.

20-Foot Flatrack Project Easy ISO

20-Foot Flatrack, Project Easy ISO

POINT OF CONTACT

D. Swanick
MSD/YBAC
Eglin AFB, FL 32542-5000
Autovon 872-4173/Commercial (904) 882-4173

ITEM DESCRIPTION

Project Easy ISO is the evaluation of ISO flatrack containers for transport of munitions by DOD. The flatracks increase utility in loading and downloading, use existing munitions handling equipment, and reduce costs for retrograde shipping.

STATUS

In March 1983, the Air Force Armament Division at Eglin AFB gained US Coast Guard (USCG) and Bureau of Explosives (BOE) approval for load plan drawings of 30mm ammunition loaded on a 20 x 8 x 5-foot 8-inch flatrack. The loaded flatrack was successfully shipped to Korea in June 1983. The shipment confirmed the flatrack advantages of effective cube utilization and ease of unloading with conventional munitions handling equipment.

Also in March 1983, HQ FACAF completed the static test loading of 11 different air munition loads on a 20 x 8 x 8-foot flatrack. Drawings for these load configurations have been developed by the US Army Defense Ammunition Center and School and Load Plans have obtained USCG/BOE approval. Transportability testing of the flatrack for use on Federal Republic of Germany railroads was completed in September 1985.

The following are the drawing numbers for the approved load plans: #19487073 - MK-82; #19487074 - MK-84; #19487079 - MK-20; #19487079/1 - 30mm Ammunition on Flatrack on Trailer; #19487086 - BLU-107/B Weapon; #19487090 - AGM-88 HARM Missile; #19487092 - CBU-87/B and CBU-89/B Cluster Bombs; #19487095 - AIM-7F (SPARROW) Missile; #19487098 - AIM-9L (SIDEWINDER) Missile.

PROGRAM PLAN

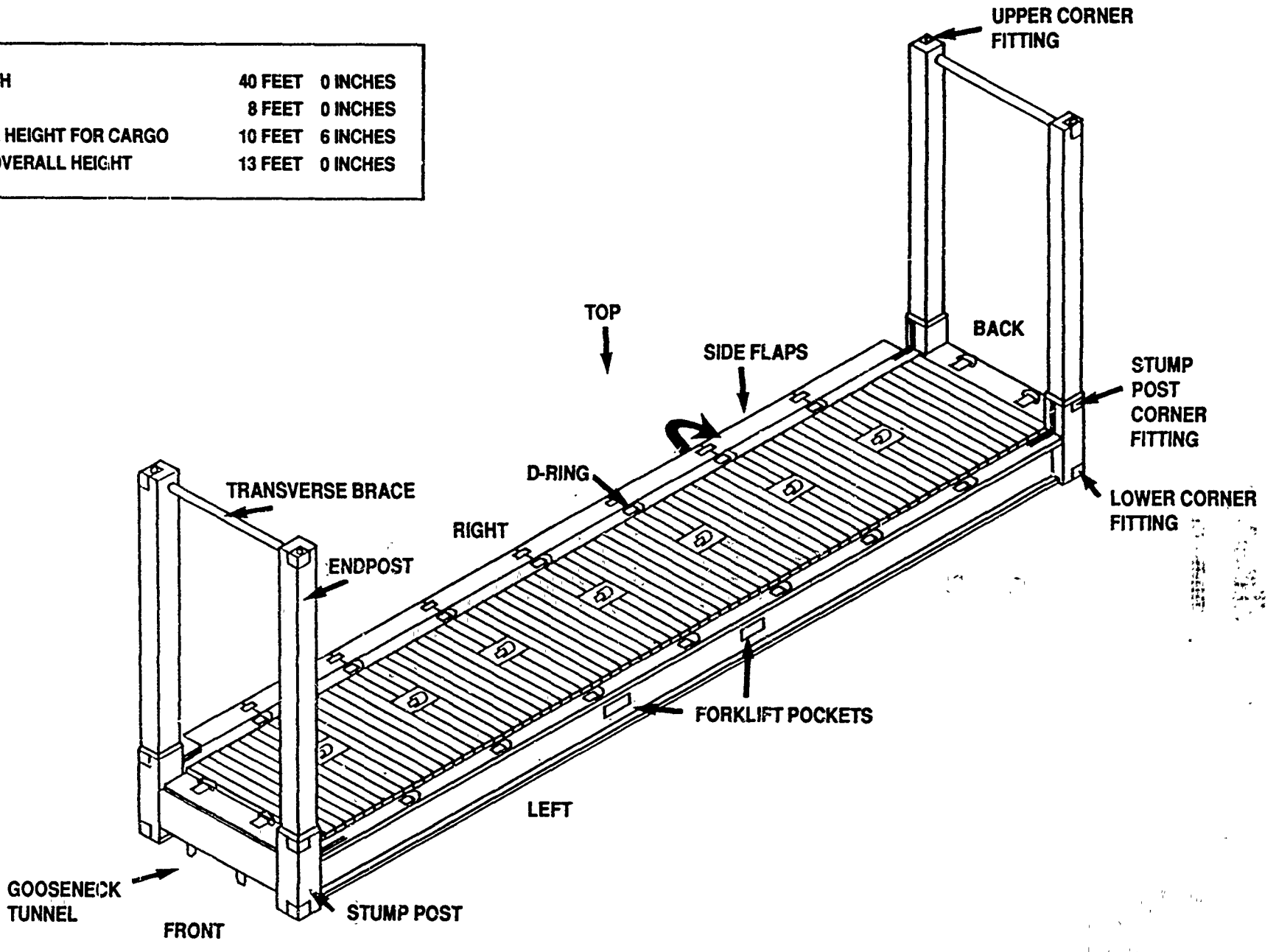
Program completed.

NSN

Not assigned.

40-Foot Heavy Duty Flatrack

LENGTH	40 FEET	0 INCHES
WIDTH	8 FEET	0 INCHES
CLEAR HEIGHT FOR CARGO	10 FEET	6 INCHES
MAX. OVERALL HEIGHT	13 FEET	0 INCHES



40-Foot Heavy Duty Flatrack

POINT OF CONTACT

M. Baig
Naval Sea Systems Command, PMS-377V
Washington, DC 20362-5101
Autovon 332-7881/Commercial (703) 602-7881

ITEM DESCRIPTION

The 40-foot heavy duty flatrack was developed to provide a breakbulk capability to containerships for the-carriage of tanks and other heavy and/or outsized cargo. The 40-foot heavy duty flatrack is a relatively uncomplicated structural steel frame, decked over and fitted with tiedown points. There are two types of flatracks, each having a different cargo capacity. The first type of flatrack has a maximum cargo capacity of 67.2 short-tons and has telescoping corner posts which are adjustable from 8.5 to 13 feet for various cargo heights. The second type of flatrack has a maximum cargo capacity of 72 short-tons and has corner posts 13 feet high. The corner posts on both types fold down to facilitate stacking and storage. The flatracks may be inserted into the container cell empty or lift loaded at a not-to-exceed gross weight (flatrack cargo) of 30 long-tons (67,200 pounds).

STATUS

The heavy duty flatrack was initially authorized in the FY83 budget for 223 units; the FY84 budget was for 135 units. Delivery of the 358 flatracks was completed during 2QFY86. Two contracts for the second type of flatrack were awarded during 2QFY88. Each contract is for 1,001 flatracks. As of December 1989, approximbately 627 of the second type flatrack have been delivered for a total flatrack inventory of 985 units. The inventory is at three storage locations: MOT, Bayonne, NJ; NWS, Charleston, SC; and CBC, Port Hueneme, CA.

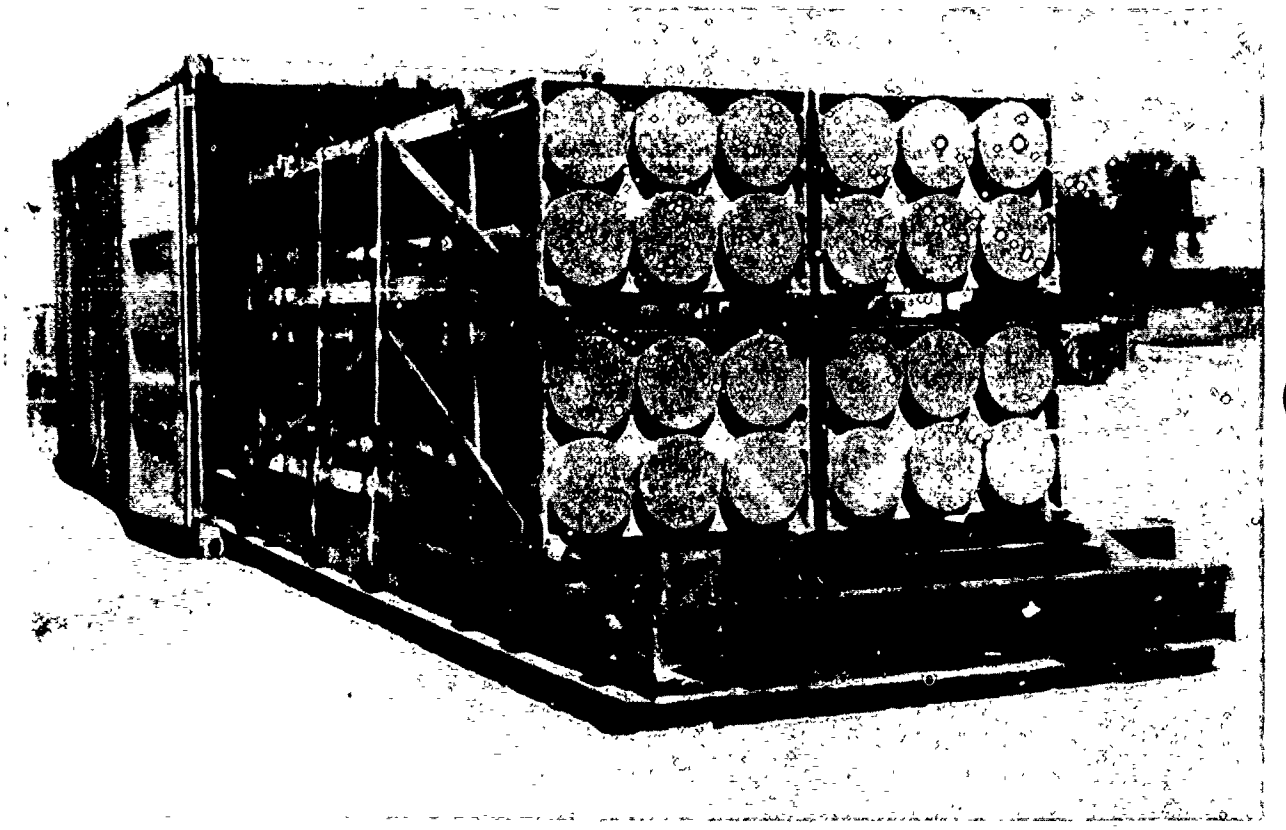
PROGRAM PLAN

Delivery completion for the second type of flatrack is planned for 2QFY91.

NSN

Not assigned.

Load and Roll Pallet (LRP)



Load and Roll Pallet (LRP)

POINT OF CONTACT

D. Chesnulovitch
PM-AMMOLOG, AMCPM-AL
Picatinny Arsenal, NJ 07806-5000
Autovon 880-4737/Commercial (201) 724-4737

ITEM DESCRIPTION

The Load and Roll Pallet (LRP) fits inside of a standard 20-foot ANSI/ISO container. The LRP allows a complete load of four Multiple Launch Rocket System (MLRS) Pods (each weighing 5,078 pounds) to be rolled out of an end opening container so they can be easily unloaded from the side. Two 6,000-pound capacity forklifts or one 10,000-pound capacity or larger forklift lifts up one end of the fully loaded LRP just high enough to clear the floor of the container and can easily roll the entire load in or out of the containers. The LRP can also be extracted with the Heavy Expanded Mobility Tactical Truck (HEMTT), 5-ton wrecker, or a 5-ton truck with a winch. Unloading can be accomplished in the field in approximately one-fourth of the time required using the current method of dragging the MLRS Pods out of the container.

A modification of the LRP called the Fast LRP is also being investigated. The Fast LRP uses the same concept as the LRP, though the FAST LRP has a wooden deck and 20-ton capacity for use in transporting Class V explosives.

STATUS

Testing of the LRP concept was conducted during November 1987 at Miesau Army Depot and the results were favorable. Ten LRPs were bought and delivered to the US Army Defense Ammunition Center and School in 2QFY89.

PROGRAM PLAN

Develop plans and conduct a more extensive pilot program of 250 LRPs. Conduct tests and evaluations on the Fast LRP. Obtain joint support for the LRP and Fast LRP from the Navy, Air Force, and Army.

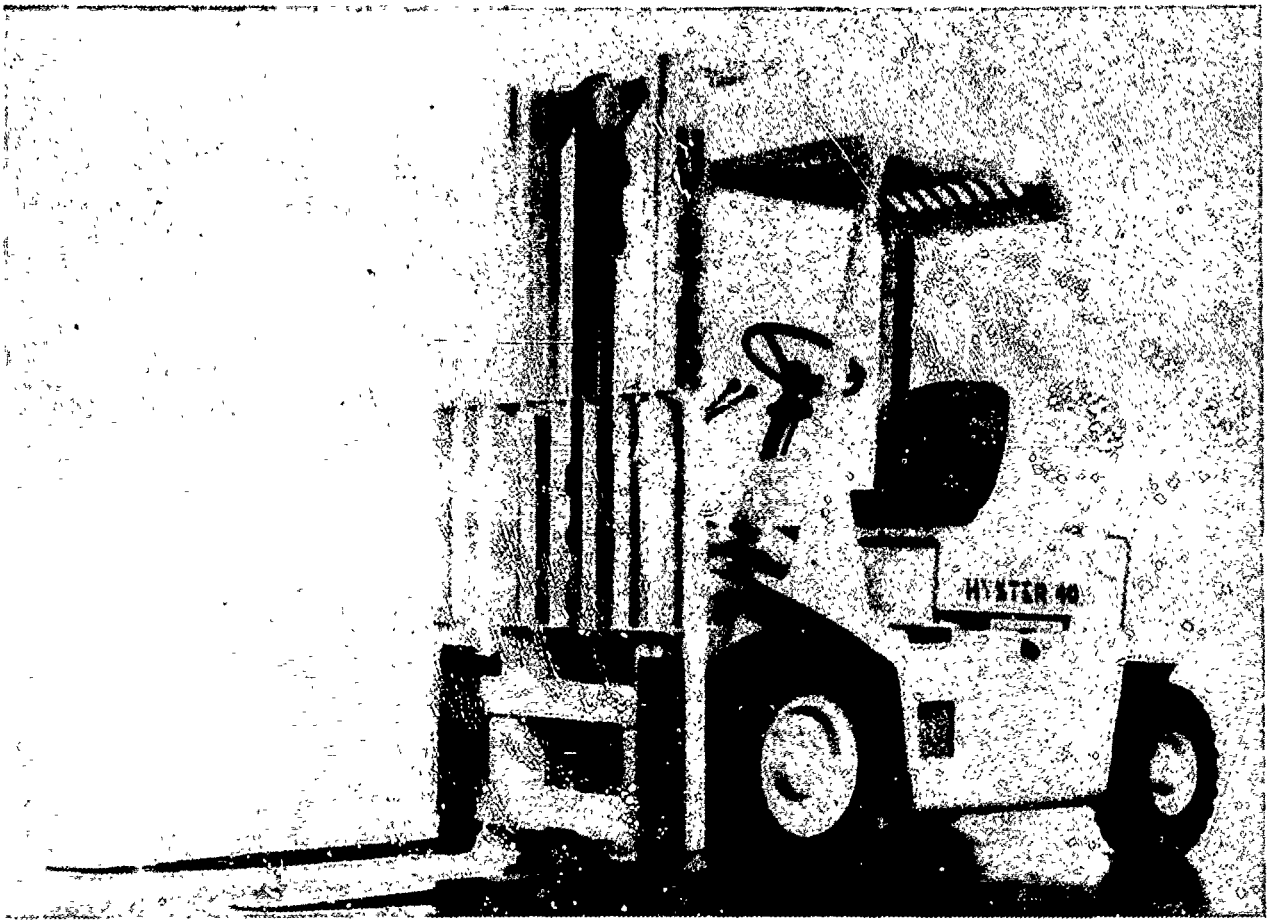
NSN

Not assigned.

PART II

HANDLING EQUIPMENT

4,000-Pound Capacity Forklift Truck



CAPACITY: 4,000 POUNDS AT 24 INCH LC
LENGTH WITH FORKS: 145 INCHES
WIDTH: 45 INCHES
HEIGHT WITH ROPS: 81 INCHES

4,000-Pound Capacity Forklift Truck

POINTS OF CONTACT

R. Riley
US Army Belvoir RD&E Center, STRBE-FMR
Fort Belvoir, VA 22060-5606
Autovon 354-4490/Commercial (703) 664-4490

COL L. Drum
Warner Robins Air Logistics Center,
WRALC/MMVV
Robins AFB, GA 31098-5609
Autovon 468-2062/Commercial (912) 926-2062

ITEM DESCRIPTION

This unit provides Air Force bases and Army Depots the capability to load and unload ISO containers. It is a commercial type pneumatic tired forklift with a lift height of at least 144 inches. The forklift has a capacity of 4,000 pounds at a 24-inch Load Center.

STATUS

The Army has an inventory of approximately 1,700 gasoline engine powered units. In FY85, the Army awarded a 5-year contract to Hyster to procure approximately 1,300 clean-burn, diesel engine powered units. The Air Force awarded an IDTC contract to Hyster in July 1989. FY86-89 requirements are for 734 units.

PROGRAM PLAN

The Army will continue to field the forklifts. The Air Force is planning to receive deliveries from Hyster beginning in August 1990.

NSN

3930-01-172-7891

4,000-Pound Capacity Forklift Truck, Rough Terrain (RTFLT)

CAPACITY: 4,000 POUNDS AT 24 INCH LC
LENGTH WITH FORKS: 205 INCHES
WIDTH: 79 INCHES
HEIGHT WITH ROPS: 80 INCHES
WEIGHT: 10,000 POUNDS

4,000-Pound Capacity Forklift Truck, Rough Terrain (RTFLT)

POINT OF CONTACT

W. Brower
US Army Belvoir RD&E Center, STRBE-FMR
Fort Belvoir, VA 22060-5606
Autovon 354-1143/Commercial (703) 664-1143

CAPT P. Tomecek
Dep CG, Marine Corps RD&A Command, SSEA
Quantico, VA 22134-5080
Autovon 278-2022/Commercial (703) 640-2022

ITEM DESCRIPTION

This item provides a capability of stuffing and stripping the 8 foot wide family of ISO containers under field conditions. The vehicle is sized to effectively operate within the ISO container including placing two pallet loads side by side within the container. The vehicle weighs approximately 10,000 pounds, is 79 inches wide, 80 inches high, and 165 inches long, excluding forks. The vehicle is 4-wheel drive for rough terrain operation and has freelift and side shift capabilities for operating within the container.

STATUS

The Army awarded a multi-year contract to J. I. Case Company during FY78. A total of 1,910 forklifts were delivered between August 1980 and July 1984. Initial fielding of 209 units was made to Korea and USAREUR. Additional fielding was made on call-up. A rebuy solicitation was issued during FY89 by the Tank-Automotive Command. The solicitation was for a 5-year procurement of approximately 1,000 vehicles. The Marine Corps bought 280 forklifts from J. I. Case Company. In FY85, the Marine Corps awarded a contract for 688 additional vehicles.

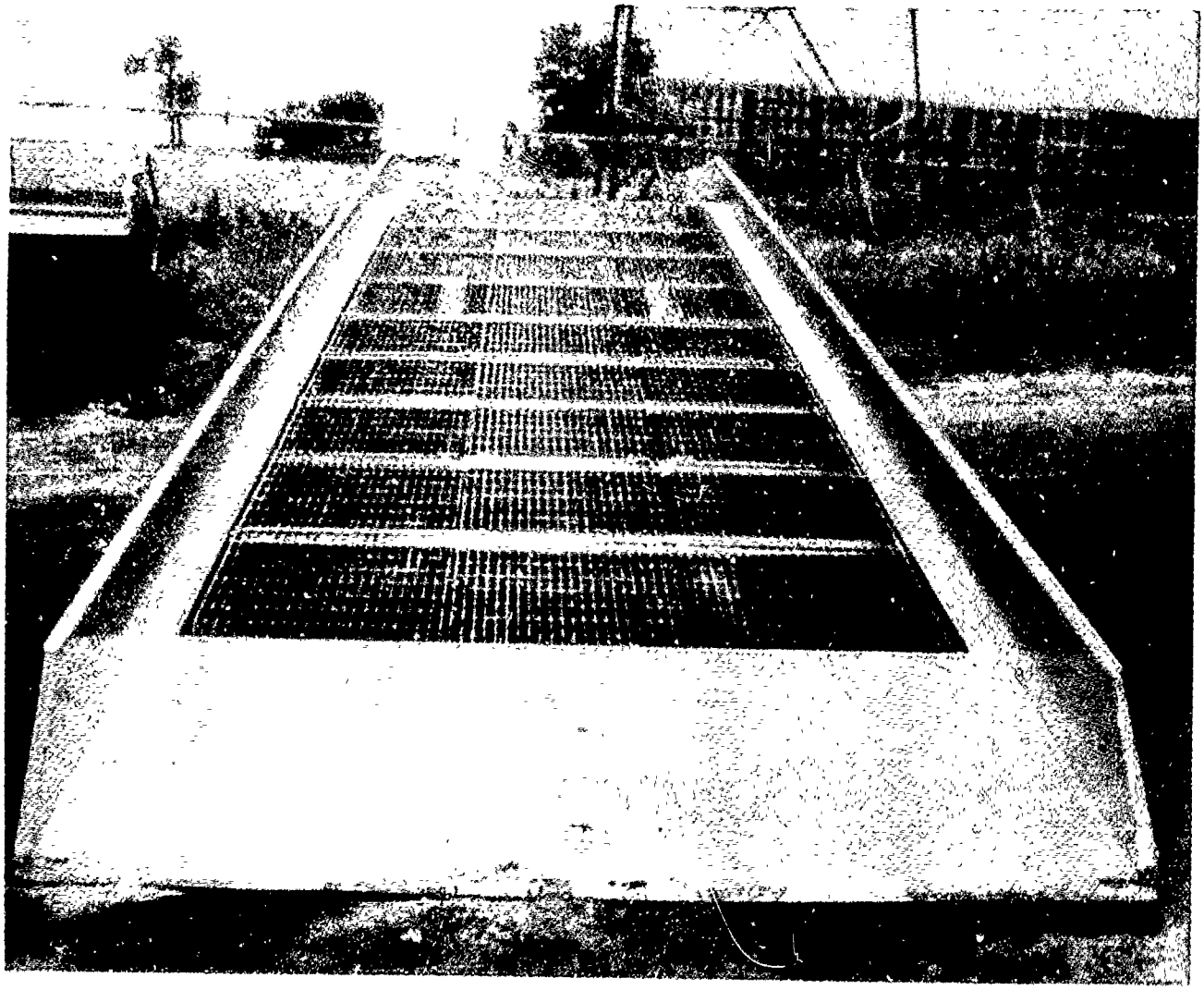
PROGRAM PLAN

Perform necessary actions as required to support the fielded forklifts. Contract award for the Army rebuy solicitation is scheduled for 2QFY90.

NSN

Army: 3930-01-076-4237
Marine Corps J. I. Case: 3930-00-415-0098
Marine Corps new: 3940-01-275-6420

Mobile Loading Ramp



CAPACITY: 16,000 POUNDS
LENGTH: 36 FEET INCLUDING 6 FOOT LEVEL-OFF SECTION
WIDTH: 8 FEET APPROXIMATELY
HEIGHT: ADJUSTABLE FROM 46 INCHES TO 65 INCHES
WEIGHT: 6,000 POUNDS APPROXIMATELY

Mobile Loading Ramp

POINT OF CONTACT

W. Brower
US Army Belvoir RD&E Center, STRBE-FMR
Fort Belvoir, VA 22060-5606
Autovon 354-1143/Commercial (703) 664-1143

ITEM DESCRIPTION

This item is used in conjunction with the 4,000-pound Rough Terrain Forklift Truck for stuffing and stripping the 8 foot wide family of containers when the container is on a semitrailer or track chassis. The ramp is 96 inches wide and 36 foot long, including a 6-foot, level-off section, and weighs approximately 6,000 pounds. The bed height is adjustable from 45 to 65 inches. The specification for the Mobile Landing Ramp is MIL-R-52899.

STATUS

A firm fixed price contract was awarded to Magline, Inc., for 83 commercial units. The preproduction testing was completed in March 1976. Production delivery took place as scheduled, from June 1976 through April 1977. A contract was negotiated with Magline, Inc., to increase the curb height to 12 inches on the 83 fielded ramps to overcome safety deficiencies. Delivery of the Magline ramps has been completed. A second multi-year contract was awarded in November 1977 to Brooks and Perkins, Inc., to provide an additional quantity of 346 ramps. Under the option in the Brooks and Perkins contact, additional quantities of 346 units were procured. A two-step multi-year procurement contract was awarded to Magline, Inc., in 4QFY81 for additional ramps. A total of 828 ramps were delivered.

PROGRAM PLAN

Support fielded ramps.

NSN

3990-01-120-4015

Variable Reach Rough Terrain Forklift Truck

Variable Reach Rough Terrain Forklift Truck

POINTS OF CONTACT

D. Krawchuk
US Army Belvoir RD&E Center, STRBE-FMR
Fort Belvoir, VA 22060-5606
Autovon 354-1143/Commercial (703) 664-1143

CAPT P. Tomecek
Dep CG, Marine Corps RD&A Command, SSEA
Quantico, VA 22134-5080
Autovon 278-2022/Commercial (703) 640-2022

ITEM DESCRIPTION

The Army and Marine Corps have two separate programs for a Variable Reach Rough Terrain Forklift Truck. The Army's program is called the 6,000-pound Capacity Variable Reach Rough Terrain Forklift Truck (6K VRRTFLT). The Marine Corps' program is called the Extendable Boom Forklift (EBFL). Both forklifts will provide the capability of loading and unloading 8 x 8 x 20-foot MILVANs and ISO containers located on the ground or mounted on a trailer under field conditions. The vehicles are designed to handle the Multiple Launch Rocket System (MLRS) pods loaded four to a container.

The Army's 6K VRRTFLT can handle 6,000-pounds at a reach of 15 feet and 4,000-pounds at a reach of 23.5 feet. The vehicle weighs 27,100 pounds, is 102 inches high, 100 inches wide, and 262 inches long without forks. The 6K VRRTFLT will replace the 6,000-pound capacity Rough Terrain Forklift.

The Marine Corps' EBFL has two different carriages. The smaller carriage can handle 4,000-pounds at a reach of 20 feet and 6,000-pounds at a reach of 10 feet. The larger carriage can handle 10,000-pound loads at a reach of 6 feet. The vehicle weighs 25,600 pounds, is 101 inches high, 102 inches wide,, and 315 inches long including the carriage.

STATUS

The Army Type Classified the 6K VRRTFLT for use in November 1984. Tank-Automotive Command awarded a production contract in January 1988 to TRAK International for 1,686 vehicles.

The Marine Corps awarded a production contract on 30 September 1988 to Lull Corporation for 361 vehicles.

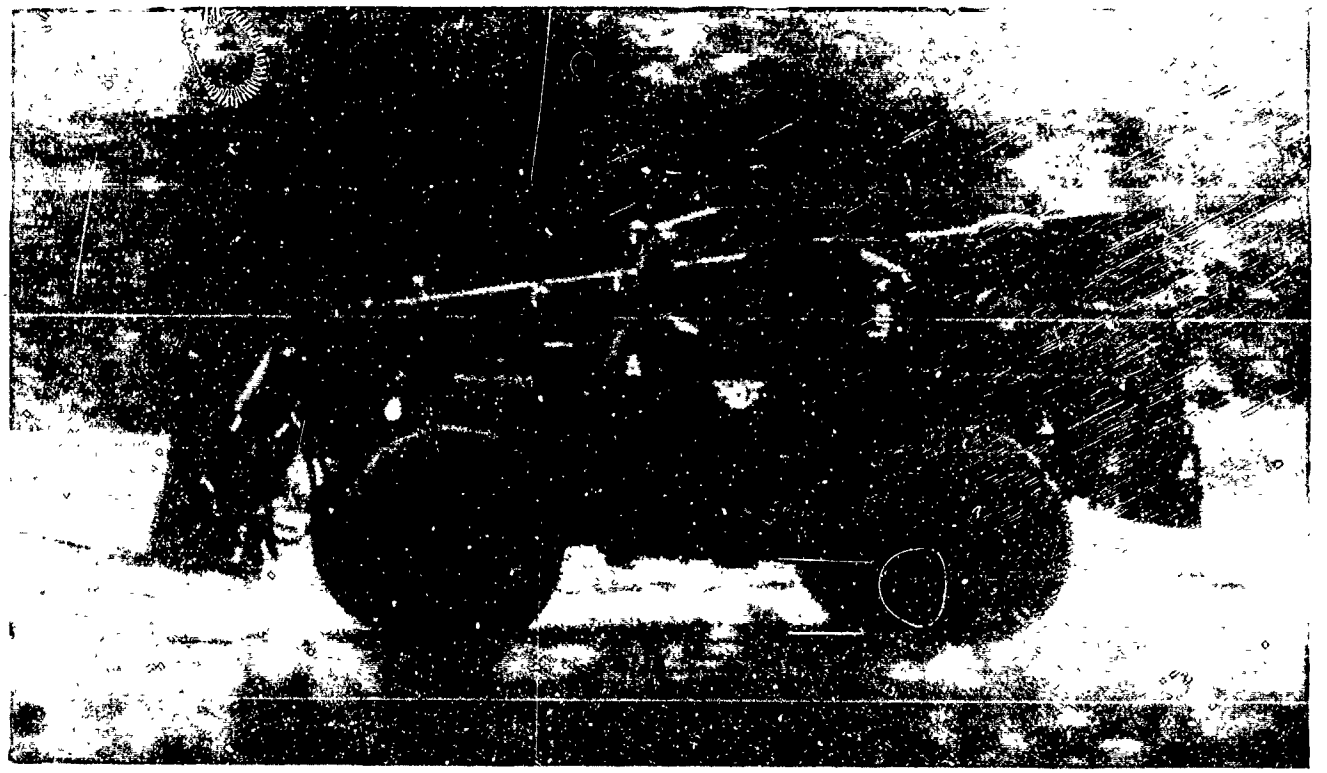
PROGRAM PLAN

The US Army's expected FUE is 2QFY90. The US Marine Corps' expected FUE will be during FY90.

NSN

Army: 3930-01-158-0849
Marine Corps: 3930-01-305-211

Universal Self-Deployable Cargo Handler (USDCH)



CAPACITY: 10,000 POUNDS AT 48 INCH LOAD CENTER
4,000 POUNDS AT 23.5 FEET REACH WITH 24 INCH LOAD CENTER
SPEED: 45 MPH

Universal Self-Deployable Cargo Handler (USDCH)

POINT OF CONTACT

D. Krawchuk
US Army Belvoir RD&E Center, STRBE-FMR
Fort Belvoir, VA 22060-5606
Autovon 354-1143/Commercial (703) 664-1143

ITEM DESCRIPTION

The Universal Self-Deployable Cargo Handler (USDCH) is a rough terrain variable reach forklift with a lift capacity of 10,000 pounds at a load canter of 48 inches. The USDCH will be self-deployable at speeds up to 45 mph to reduce the need for organic transportation. The USDCH will have a closed loop control system which will enable the vehicle to automatically engage a load after receiving input from the operator indentifying the load to be engaged. This will be accomplished by having the sensors identify the fork pockets of the identified load and "lock" onto this target thereby allowing the on-board computer to compute the best path to the target. The computer will then control both the vehicle drive functions and hydraulic manipulation of the end effector to insert the forks into the fork pockets of the load.

STATUS

The O&O Plan for the program was approved in May 1986. A contract for the Phase I, Proof of Principle prototype vehicle was awarded in September 1987 to FMC Corporation. The prototype vehicle was received in July 1989 and is currently undergoing testing at Aberdeen Proving Grounds.

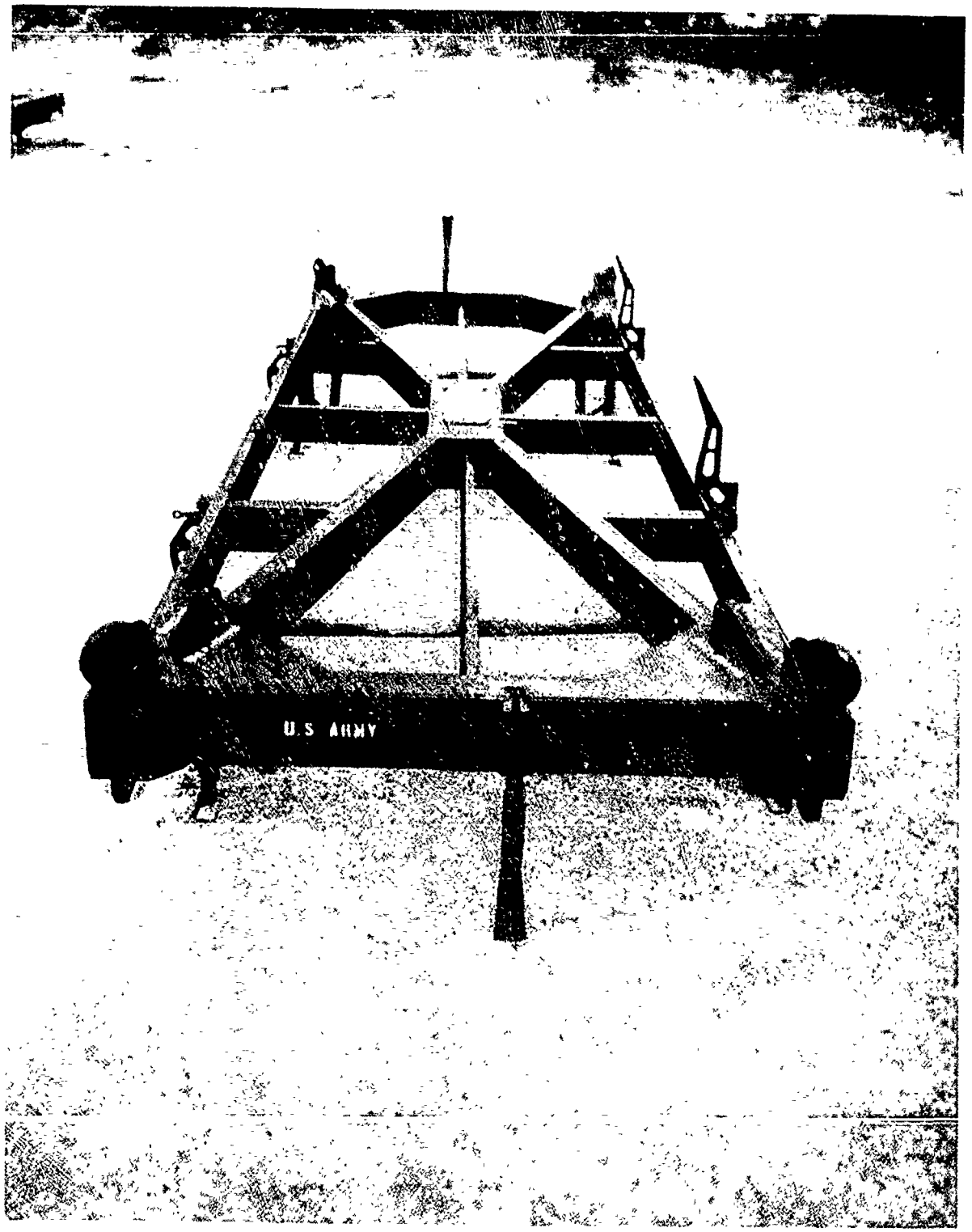
PROGRAM PLAN

Continue Phase I with a production contract award scheduled for FY94. The plan is to field the Phase I vehicle then Product Improve the fielded Phase I vehicle through three additional phases. Phases II through IV will add robotics, teleoperation, and highly autonomous capabilities, respectively, to the Phase I vehicle.

NSN

Not assigned.

Spreader Bars, Intermodal Container Handling



Spreader Bars, Intermodal Container Handling

POINT OF CONTACT

R. Riley
US Army Belvoir RD&E Center, STRBE-FMR
Fort Belvoir, VA 22060-5606
Autovon 354-4490/Commercial (703) 664-4490

ITEM DESCRIPTION

A manually operated locking frame, conforming to MIL-S-52713B(ME), used for lifting and handling ISO and intermodal containers.

STATUS

A contract was awarded in FY87 to Isometrics, Inc., for 476 20-foot spreaders and 154 40-foot spreaders. These spreaders were procured in support of the Rough Terrain Container Crane (RTCC), currently in production. First Article Testing of the spreaders was conducted in two phases: the first phase was successfully conducted at the manufacturers facilities, and the second phase was conducted in conjunction with the First Article Test for the RTCC.

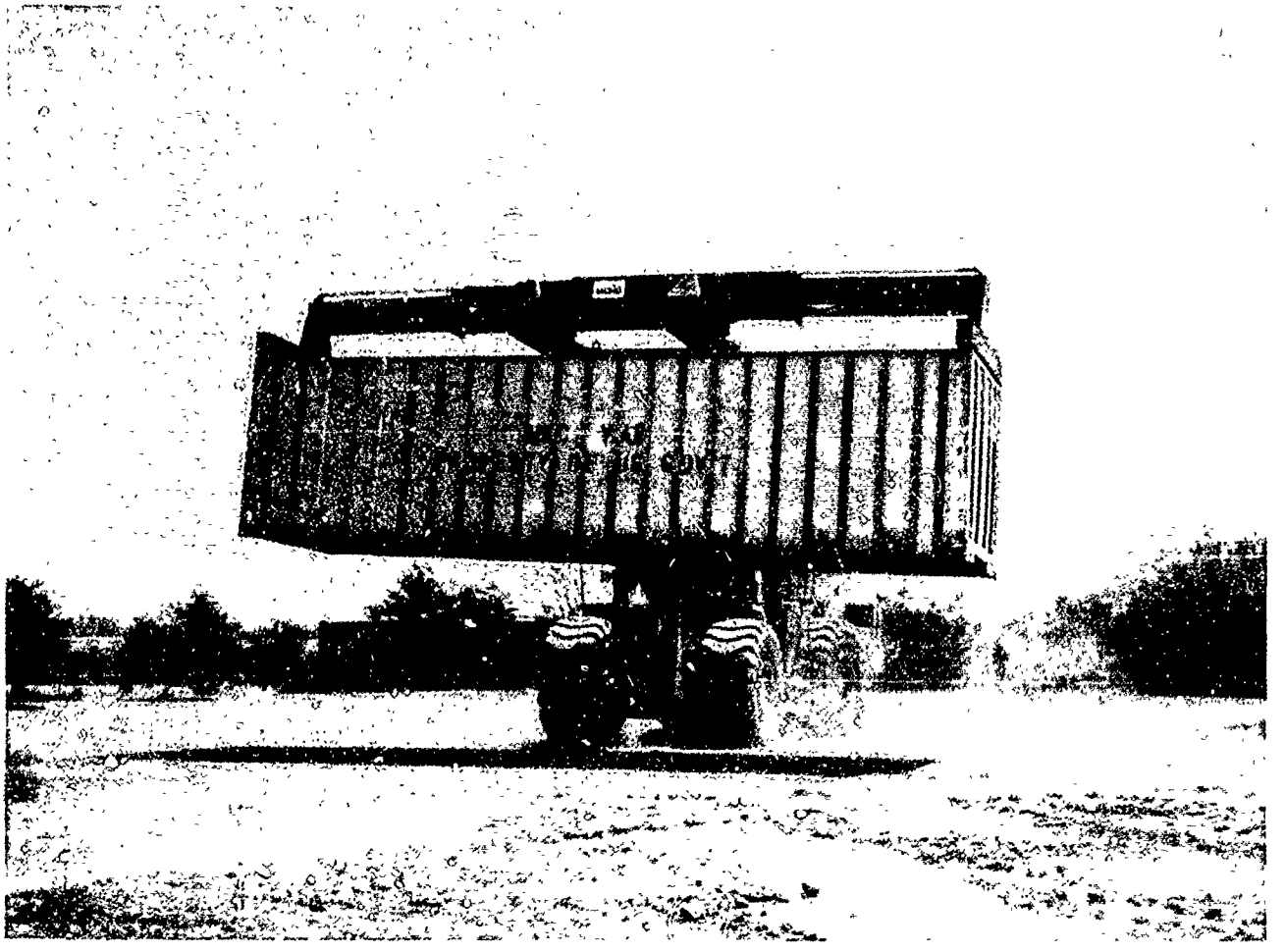
PROGRAM PLAN

No additional procurement actions have been scheduled.

NSN

20 Foot: 3990-01-258-2010
40 Foot: 3990-01-258-2011

Spreader Bars, Intermodal Container Handling, Lightweight Expandable



Spreader Bars, Intermodal Container Handling, Lightweight Expandable

POINT OF CONTACT

R. Riley
US Army Belvoir RD&E Center, STRBE-FMR
Fort Belvoir, VA 22060-5606
Autovon 354-4490/Commercial (703) 664-4490

ITEM DESCRIPTION

The lightweight expandable spreader bar is an electro/hydraulic activated spreader used with the Army's 50,000-pound capacity Rough Terrain Container Handler (RTCH) for lifting and handling ISO and intermodal containers. The spreader weighs under 10,000 pounds and is capable of expanding longitudinally to handle 20-, 35-, and 40-foot containers.

STATUS

Three lightweight expandable spreader bars were obtained on loan from various commercial manufacturers during FY84. Conceptual testing, conducted at Fort Belvoir, VA, was completed during FY85. Two lightweight expandable spreaders were procured during FY86 for additional testing. Concept Evaluation Program (CEP) tests were conducted at Fort Eustis, VA, during FY86. Results of the CEP tests were evaluated during FY87. The Transportation School recommended that additional CEP testing be conducted. The additional CEP testing was conducted at Fort Eustis, VA, during 4QFY88, and the test reports were published during 3QFY89.

PROGRAM PLAN

No further program plans have been scheduled.

NSN

Not assigned.

Crane Rotator

Crane Rotator

POINT OF CONTACT

R. Riley
US Army Belvoir RD&E Center, STRBE-FMR
Fort Belvoir, VA 22060-5606
Autovon 354-4490/Commercial (703) 664-4490

ITEM DESCRIPTION

A gasoline engine driven, hydraulically-operated, crane operator-actuated rotating device used for rotating ISO and intermodal containers up to 360 degrees by a crane for easy placement and retrieval.

STATUS

A contract was awarded to BROMMA, Inc., in FY85 for one gasoline engine-driven, hydraulically - operated crane rotator. Concept Evaluation Program (CEP) tests were conducted at Fort Eustis, VA, during FY86. Results of the CEP tests were evaluated during FY87. The Transportation School recommended that additional CEP testing be conducted. The additional CEP testing was conducted at Fort Eustis, VA, during 4QFY88. Results from the additional CEP testing were published during 3QFY89.

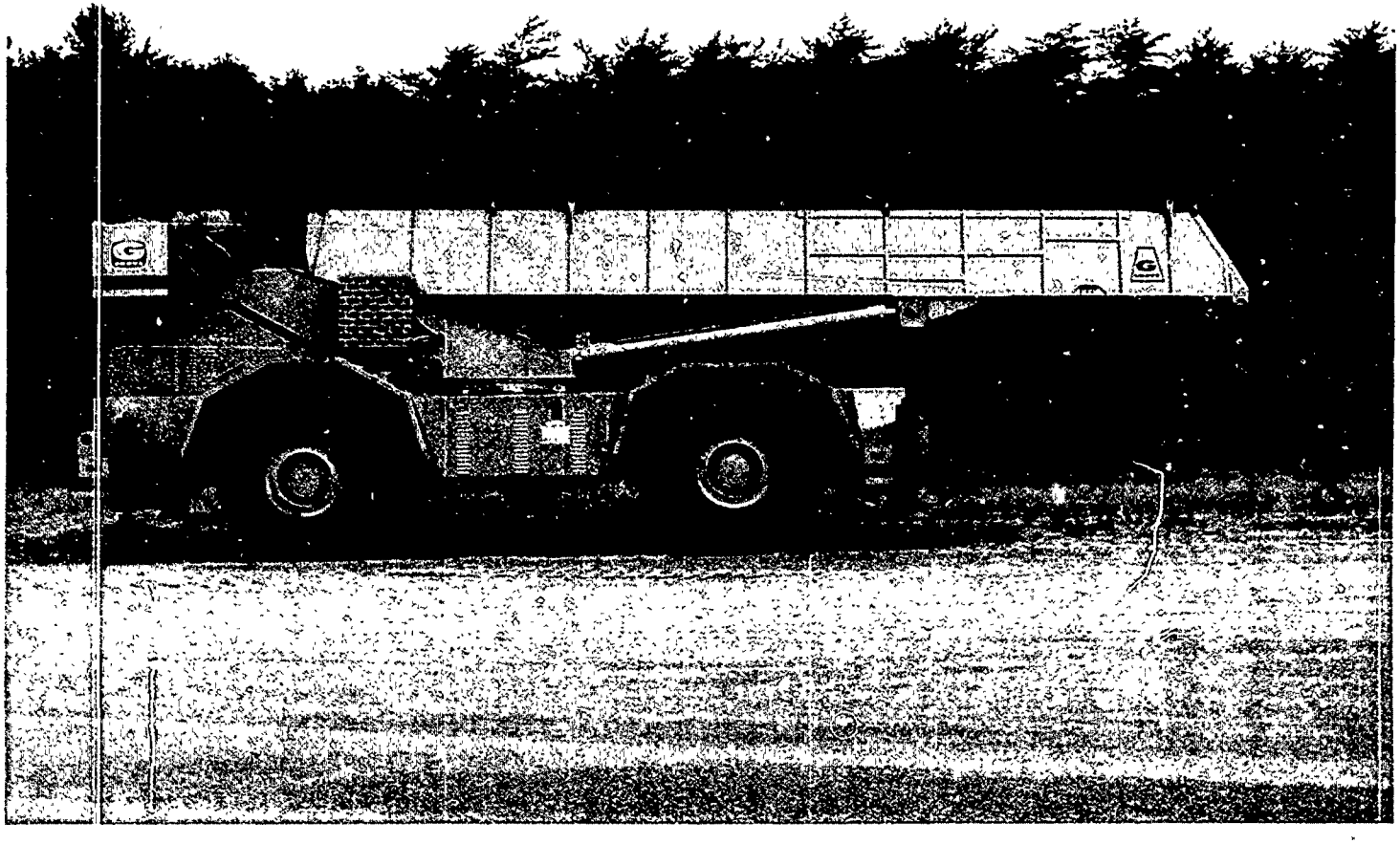
PROGRAM PLAN

No further program plans have been scheduled.

NSN

Not assigned.

Rough Terrain Container Crane (RTCC)



Rough Terrain Container Crane (RTCC)

POINT OF CONTACT

V. Batson
US Army Belvoir RD&E Center, STRBE-FMR
Fort Belvoir, VA 22060-5606
Autovon 354-4490/Commercial (703) 664-4490

ITEM DESCRIPTION

The crane is commercially designed and truck-mounted. The RTCC is capable of lifting a 20-foot container weighing 44,800 pounds at a radius of 27 feet and a 35/40-foot container weighing 67,200 pounds at a radius of 22 feet. General Support (GS) ammunition units will use the RTCC "from a fixed position" for transfer of 20-foot ANSI/ISO containers from one mode of transportation to another or to ground/ load containers from/to waiting transportation in the Theater and Corps ammunition storage areas. Transportation units will use the crane to augment the 50,000-pound Rough Terrain Container Handler in the transfer and handling of 20-, 35-, or 40-foot containers and other cargo between transportation modes and in storage areas.

STATUS

A Market Investigation was completed in FY85 and a specification prepared in FY86. Two candidate cranes were leased and evaluated during 3QFY85. The crane was type classified standard in August 1985, and was transitioned to the US Army Tank-Automotive Command (TACOM). A contract was awarded to Grove Manufacturing Company on 16 October 1986 for 254 vehicles. Preproduction testing was conducted 1QFY88 to 4QFY88. Initial production testing was completed 2QFY89. Delivery of the RTCC commenced during June 1989. As of December 1989, 139 RTCCs have been delivered.

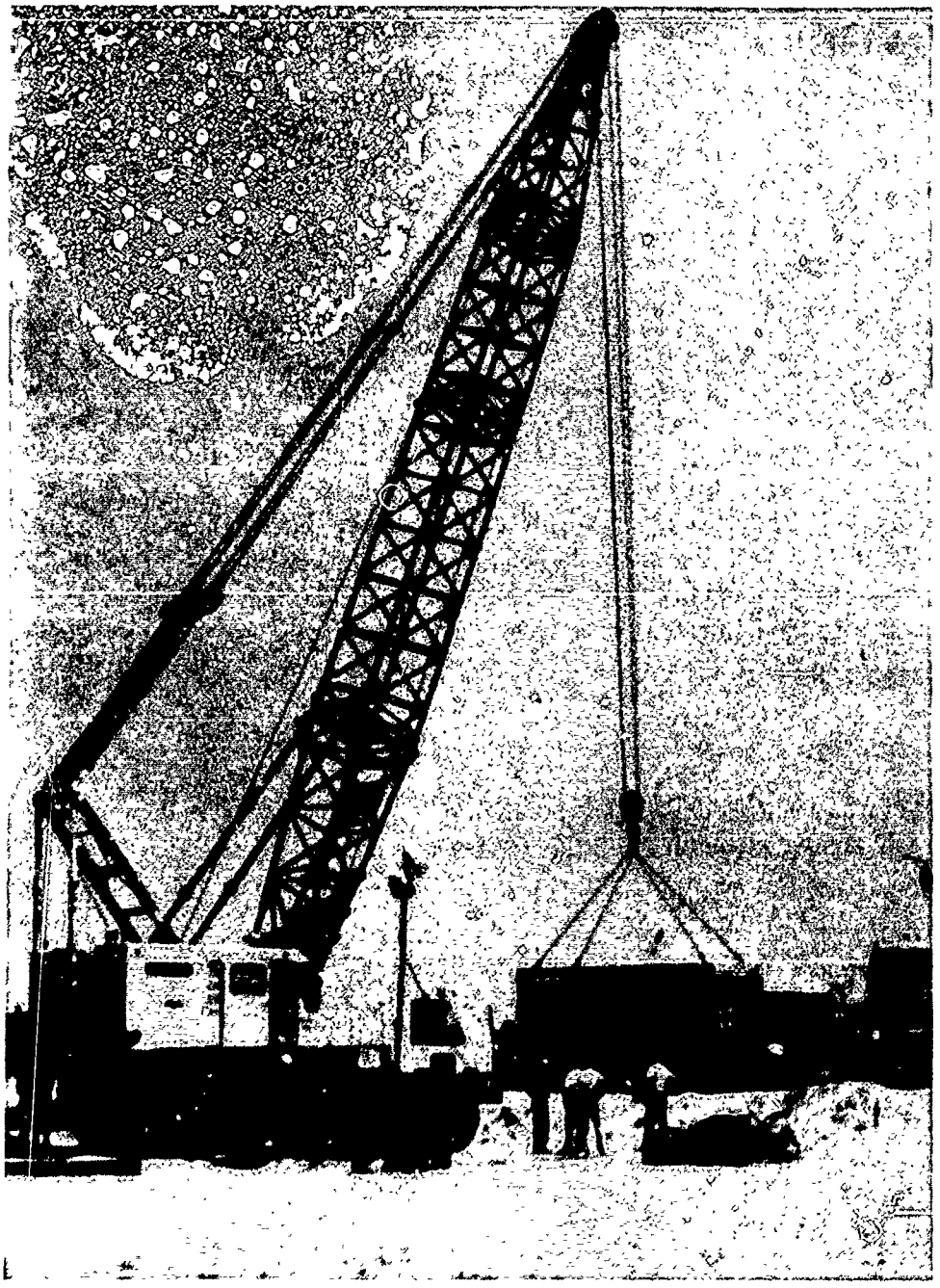
PROGRAM PLAN

Continue fielding the RTCC.

NSN

3810-01-205-2716

140-Ton, Truck-Mounted, Container Handling Crane



CAPACITY: 140 TONS APPROXIMATELY 12 FEET
LENGTH WITH 50 FOOT BOOM: 873 INCHES
WIDTH: 132.5 INCHES
HEIGHT: 157.8 INCHES
WEIGHT WITH 120 FOOT BOOM: 195,000 POUNDS

140-Ton, Truck-Mounted, Container Handling Crane

POINT OF CONTACT

E. Rodrick
US Army Belvoir RD&E Center, STRBE-FMR
Fort Belvoir, VA 22060-5606
Autovon 354-1143/Commercial (703) 664-1143

ITEM DESCRIPTION

The crane is a commercial design, truck-mounted, and has 140-ton maximum capacity. It has an 8 x 4 truck chassis and a 50-foot basic boom which can be extended in length up to 130 feet with the use of various lengths of lattice boom. The crane is used in the loading and unloading of containers from ships in a fixed port operation or landing craft in a Logistics-Over-the-Shore (LOTS) operation and for handling containers in a marshalling area and terminal sites.

STATUS

A multi-year contract was awarded to FMC Corporation in September 1980 for 28 cranes. Deliveries began in January 1982 and were completed during FY85.

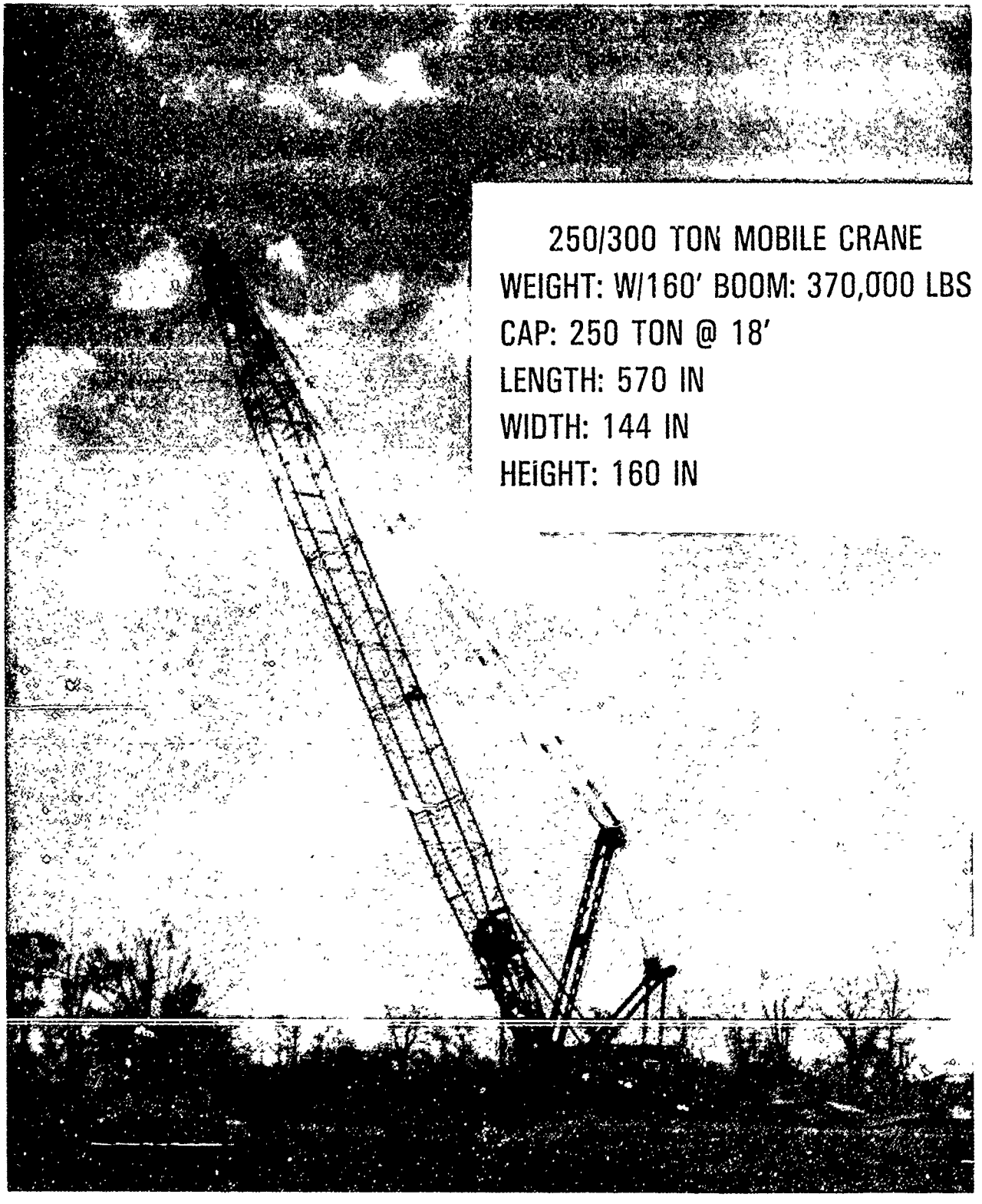
PROGRAM PLAN

Update technical data package for future procurements.

NSN

3950-01-027-9254

250/300-Ton, Truck-Mounted, Container Handling Crane



250/300-Ton, Truck-Mounted, Container Handling Crane

POINT OF CONTACT

E. Rodrick
US Army Belvoir RD&E Center, STRBE-FMR
Fort Belvoir, VA 22060-5606
Autovon 354-1143/Commercial (703) 664-1143

ITEM DESCRIPTION

The crane is a commercial design, truck-mounted, and has a 250-ton maximum capacity. It has a 12 x 6 truck chassis and a 70-foot boom which can be extended in length up to 130-feet with the use of various lengths of lattice boom. The crane is used in the loading and unloading of containers from ships in a fixed port and alongside these ships on barges, piers, and floating platforms in a Logistics-Over-the-Shore (LOTS) environment. The crane is also used for the loading and unloading of containers from lighters over the beach in a LOTS environment.

STATUS

A total of eight cranes have been delivered by Harnischfeger Corporation, satisfying the Army's total requirement. A Product Improvement Program (PIP) was approved to incorporate the Rider Block Tagline System (RBTS) developed by the Navy to minimize the pendulation problem in the sea environment. A contract to design, fabricate, install, and test an RBTS prototype was awarded in FY84. An RBTS prototype unit was installed on a 250-ton crane mounted on a "B" DeLong Barge. The RBTS was successfully tested during the FY84 J-LOTS exercise. Due to the development of the Navy TACS Ship, further development of the RBTS has been terminated.

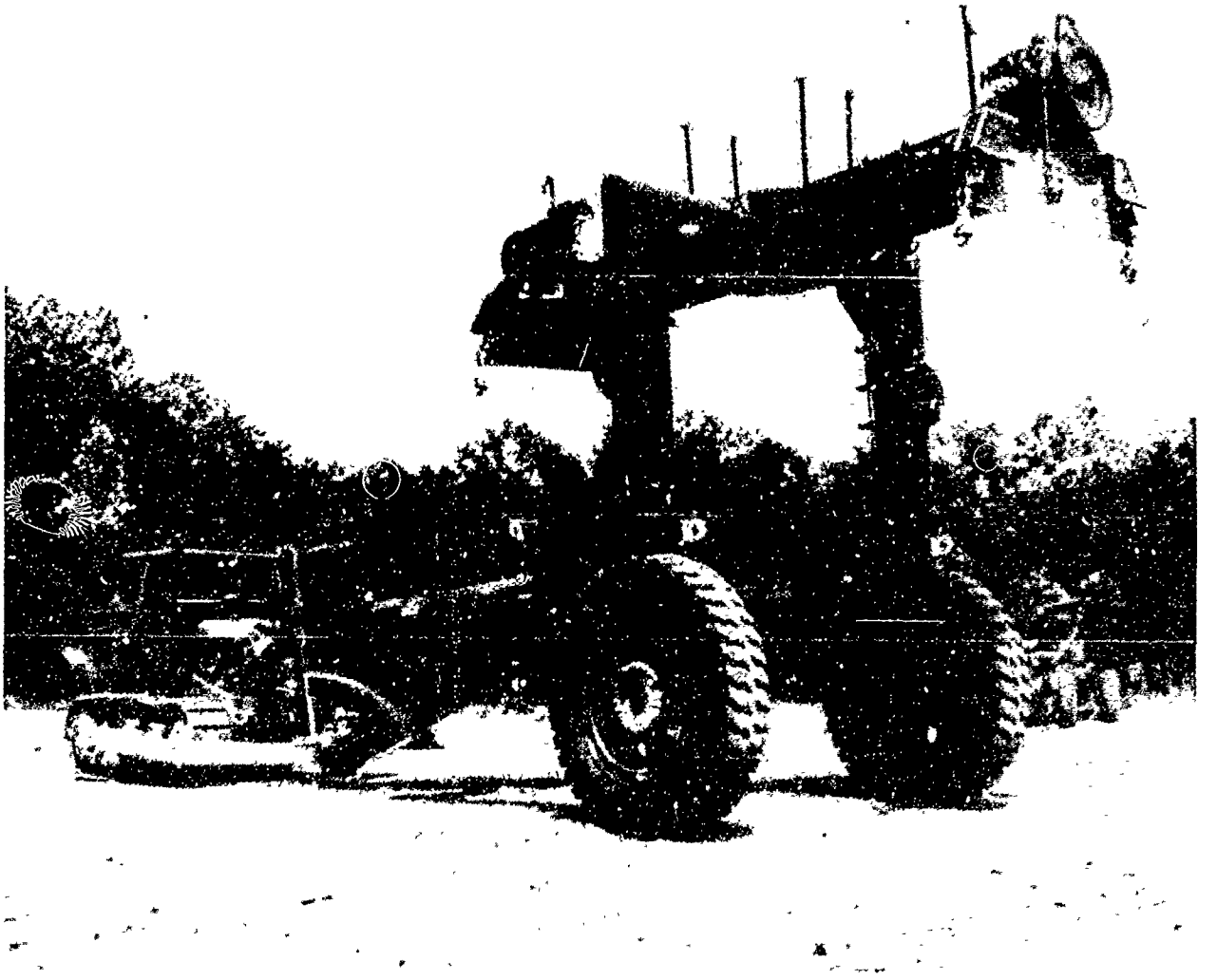
PROGRAM PLAN

None.

NSN

3950-01-027-9253

Lightweight Amphibious Container Handler (LACH)



Lightweight Amphibious Container Handler (LACH)

POINT OF CONTACT

CAPT S. Loconto
Dep CG, Marine Corps RD&A Command, SSEA
Quantico, VA 22134-5080
Autovon 278-2022/Commercial (703) 640-2022

ITEM DESCRIPTION

The LACH is a straddle-lift type, towed, two-wheel mounted, container handler. The LACH is capable of lifting and carrying containers, ramp entry into large landing craft, and loading and unloading containers onto/from cargo trailers during amphibious operations. The LACH, when propelled by its prime mover (medium size bulldozer), can be maneuvered in the surf zone in up to 5 feet of water with a 20-foot container weighing up to 50,000 pounds.

STATUS

FY81 funds were appropriated for the production procurement of 56 LACHs to complete the Marine Corps inventory objective. All LACHs have been delivered to MCLBs. Each Maritime Prepositioning Ship Squadron were equipped with four LACHs.

PROGRAM PLAN

No additional procurement actions are planned.

NSN

3920-01-143-9607

50,000-Pound Container Handler, Rough Terrain (RTCH)

CAPACITY: 50,000 POUNDS AT 48 INCHES LC
LENGTH WITH FORKS: 420 INCHES
WIDTH: 138 INCHES
HEIGHT: 167 INCHES
WEIGHT: 103,000 POUNDS (W/O SPREADER)

SPREADER BAR WEIGHTS

20 FEET: 3,800 POUNDS
35 FEET: 9,120 POUNDS
40 FEET: 9,927 POUNDS

50,000-Pound Container Handler, Rough Terrain (RTCH)

POINTS OF CONTACT

E. Rodrick
US Army Belvoir RD&E Center, STRBE-FMR
Fort Belvoir, VA 22060-5606
Autovon 354-1143/Commercial (703) 664-1143

CAPT S. Loconto
Dep CG, Marine Corps RD&A Command, SSEA
Quantico, VA 22134-5080
Autovon 278-2022/Commercial (703) 640-2022

COL Drum
Warner Robins Air Logistics Center, WRALC/MMVV
Robins AFB, GA 31098-5609
Autovon 468-2062/Commercial (912) 926-2062

ITEM DESCRIPTION

This vehicle provides a capability of handling the 8 foot wide family of containers weighing up to 50,000 pounds and 20-, 35-, and 40-foot long. It is capable of operating as a rough terrain truck primarily in supply holding storage and marshalling areas by selected supply, ammunition, and transportation units. The RTCH is a modified commercial design and procured to a military specification. The vehicle weighs approximately 103,000 pounds, is 138 inches wide, 167 inches high, and 35 feet long.

STATUS

A multi-year contract was awarded to the Caterpillar Tractor Company for 344 vehicles. The Air Force procured three for use with CADS shipments, and the Marine Corps procured 21. Production and delivery of all vehicles have been completed. The Marine Corps increased their quantity to a total of 106 by awarding a contract for the additional RTCHs which were delivered in FY88. Ten are aboard each Maritime Prepositioning Ship Squadron.

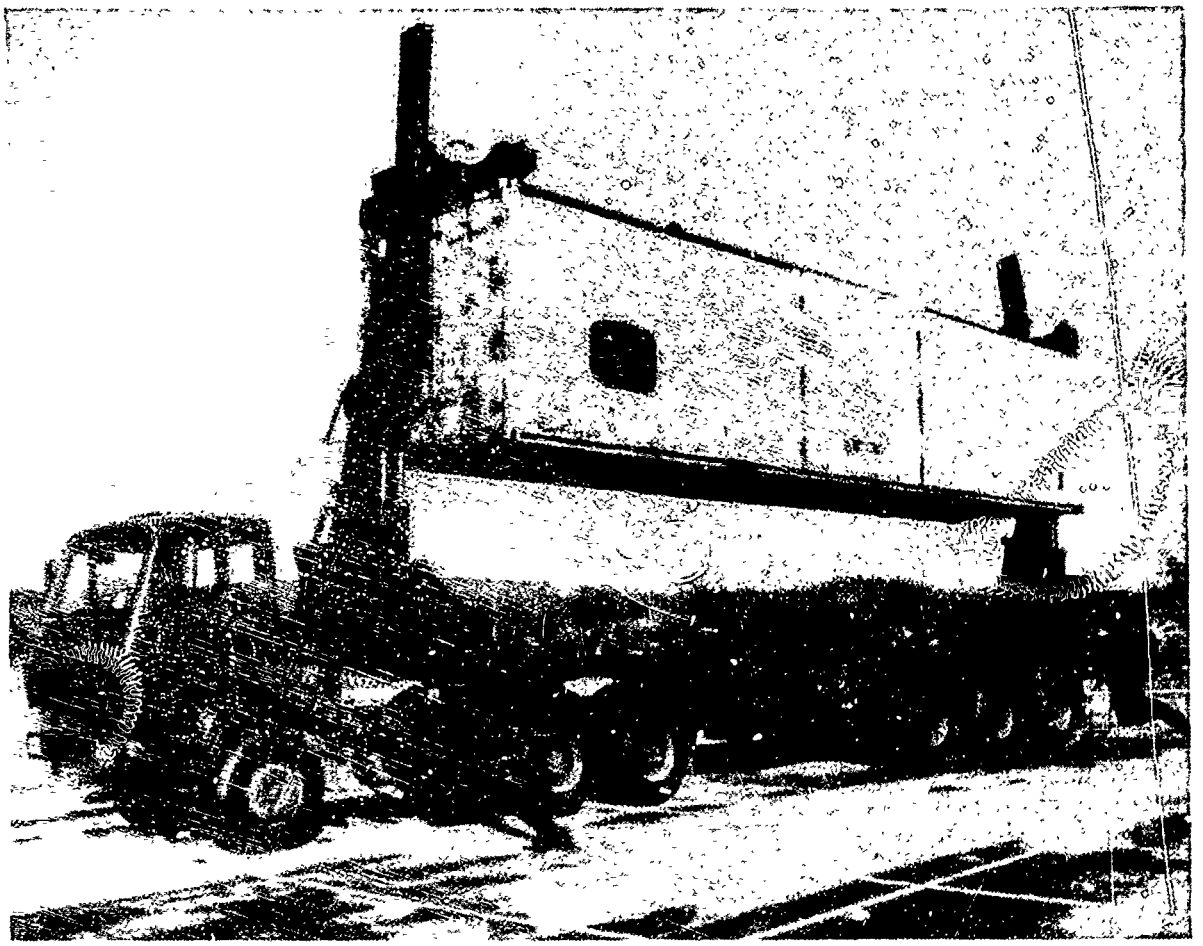
PROGRAM PLAN

Provide support for fielded vehicles. The Marine Corps' truck deliveries to the FMF begin in FY90 and are scheduled to be completed by the end of FY90. The Air Force fielded nine additional vehicles in FY89 with six scheduled for FY90.

NSN

3930-01-082-3758

20/40 Foot Container Sideloader



20/40 Foot Container Sideloader

POINT OF CONTACT

W. Allenbacher
HQ US Air Force Europe, LGTT
Ramstein AB, GE, APO New York 09094-5000
Autovon 480-6321/7468/Commercial 06371-47-6321/7468

ITEM DESCRIPTION

This diesel-powered container sideloader is capable of transferring or self-loading and transporting 20- through 40-foot ISO containers or tactical shelters. Maximum lifting capability is 66,150 pounds, with an additional 10 percent safety factor built-in. The unit has a telescopic spreader bar for 20-, 35-, and 40-foot containers, and will also lift containers with slings. The sideloaders can transport containers within maximum road height limitations. They also have an air ride suspension making it viable to transport ISO containers carrying delicate equipment. The unit is self-deployable by road and by C-5 military airlift. An optional 26-ton tractor is used to pull the sideloader.

STATUS

Four Klaus handlers were procured by the Army for Miesau Army Ammo Depot in 1972 to meet an urgent requirement for container handling. A BeSima/Marmon handler and a Steadman handler were procured by the Army and evaluated by Belvoir RD&E Center in 1975-76. The Steadman handler was subsequently provided to ASP-1 Vilseck, Germany. In August 1978, four additional Klaus handlers with tractors were procured for Army use at ASP-1. In 1982, the Air Force successfully tested the use of a sideloader (on loan from the Army) during an Air Force CADS movement to Germany. USAFE purchased two sideloaders in early 1984 under the Productivity Investment Program. These sideloaders were used successfully to support several CADS movements in both MILVANs and SEAVANs during 1984. USAFE bought 27 additional 40-foot sideloaders between FY86 and FY88. The sideloaders are used throughout Europe to support CADS and ISO container movements. USAFE bought six 20-foot capacity sideloaders during 1QFY90. The 20-foot sideloaders will enable USAFE to increase maneuverability in close areas. The Army in Germany has met its inventory objective of 18 units for 20-foot container (44,800-pound) capacity sideloaders.

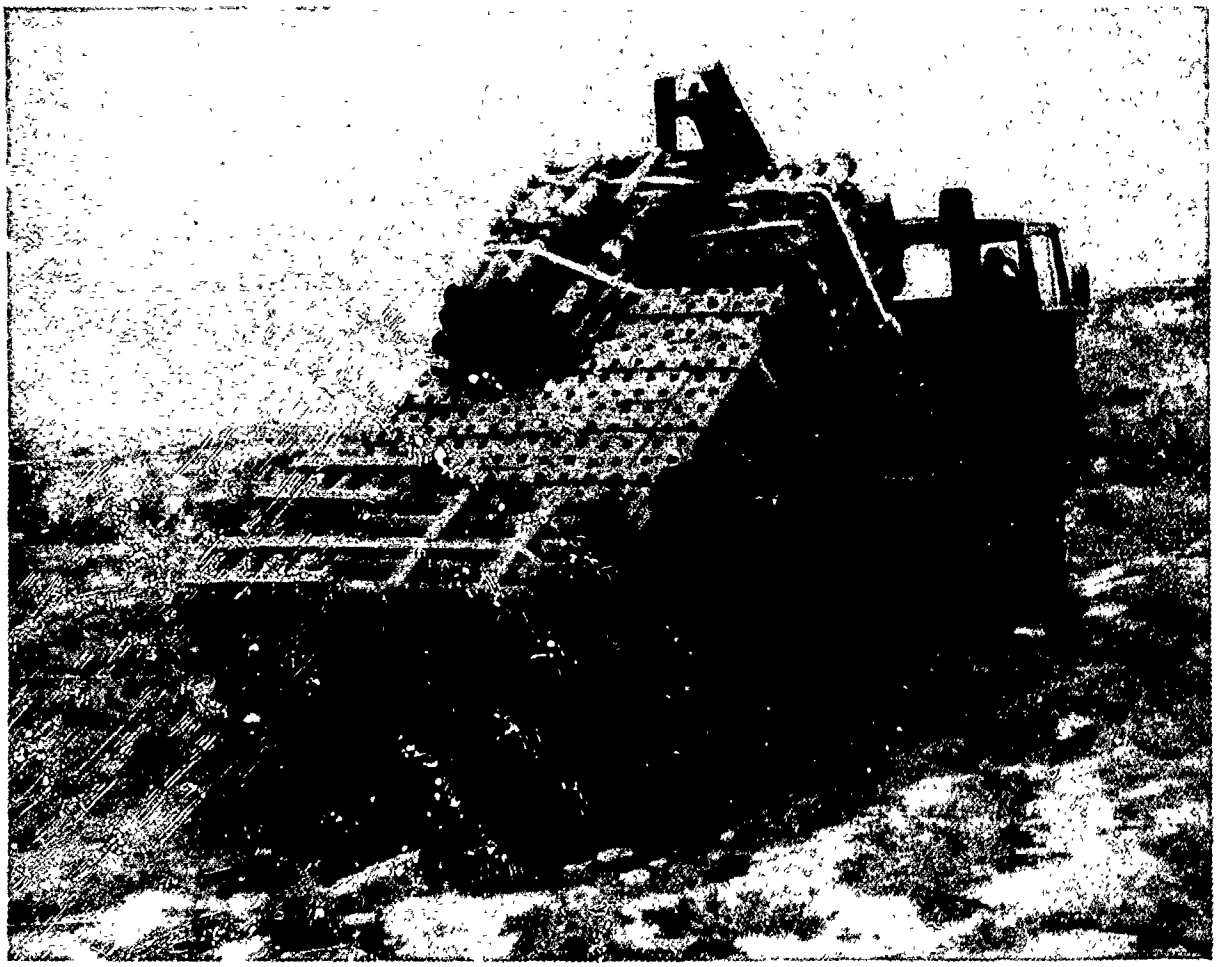
PROGRAM PLAN

USAFE will accept and field the 20-foot sideloaders during FY90. The Army has no active program for this item.

NSN

40 Foot: 3810-01-228-0190CT
20 Foot: Unknown

Palletized Loading System (PLS)



Palletized Loading System (PLS)

POINT OF CONTACT

COL W. Stoddart
US Army Tank-Automotive Command, AMCPM-TVH
Warren, MI 48397-5000
Autovon 786-5800/Commercial (313) 574-5800

ITEM DESCRIPTION

The Palletized Loading System (PLS) consists of a standard mobility heavy truck chassis, an integral hydraulic load handling mechanism, a compatible trailer, and a number of flatracks. The system is capable of self-loading and self-unloading the flatracks from the ground onto the truck chassis using the integral load handling system. The vehicle-mounted load handling system also has the capability to load and unload flatracks onto the companion trailer. Both the truck and the companion trailer have a 16.5 ton payload capacity.

STATUS

Three heavy (15-ton payload) PLSs were evaluated for 2 years by ADEA and the 9th ID at Fort Lewis, WA. Three additional heavy and 15 medium (7.5-ton payload) PLSs were evaluated by ADEA betwee 2QFY85 and 2QFY86. Under a separate program, the Tank-Automotive Command (TACOM) leased 46 PLSs of 10- and 15-ton payloads for use in Force Development Test and Evaluation (FDTE) at Fort Hood, TX, during 1QFY87. The results showed the advantages of PLS in the distribution of ammunition. A solicitation for producing the PLS prototypes was released and three prototype contracts were awarded by TACOM on 18 January 1989, to General Motors Corporation, PACCAR, and Osh Kosh. Testing of the prototypes commenced September 1989 at Aberdeen Proving Ground.

PROGRAM PLAN

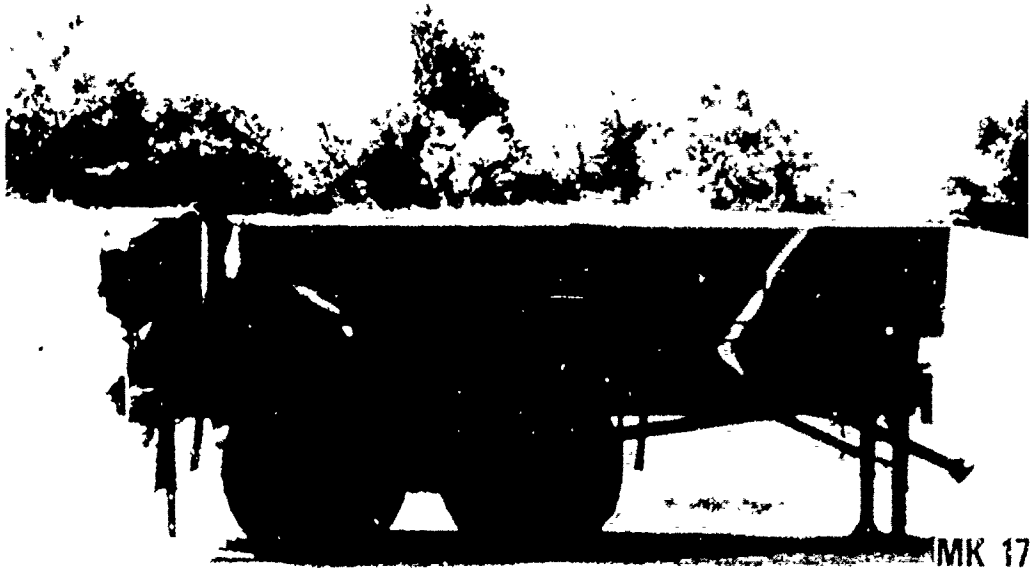
Complete testing of the prototype vehicles. The production contract is planned for 3QFY90.

NSN

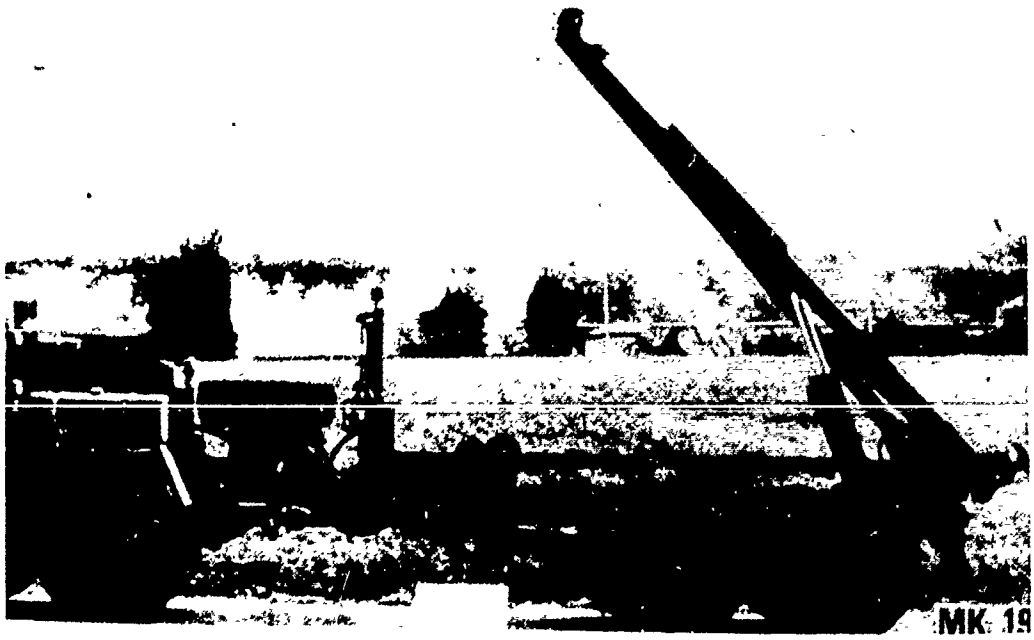
Truck with MHE Crane: 2320-01-304-2277
Truck: 2320-01-304-2278
Trailer: 2330-01-303-5197
Flatrack: 3990-01-307-7676

Logistics Vehicle System

MK 48/MK 14



MK 17



MK 19

Logistics Vehicle System

POINT OF CONTACT

MAJ R. Zant
Marine Corps RD&A Command, Code SSCMT
Washington, DC 20380-0001
Autovon 226-1154/Commercial (202) 696-1154

ITEM DESCRIPTION

The Logistics Vehicle System consists of one front power unit (MK48) and any one of five rear body unit configurations. The MK14, Container Hauler, is an ISO twist-lock equipped, 22.5-ton capacity; rear body unit designed to transport standard ISO 8 x 8 x 20-foot containers, shelters, and modules. The MK17, Dropside Cargo with crane, is a rear body unit with an 8 x 16-foot loading area designed as a troop carrier as well as a carrier for fuel/water modules, and 8 x 8 x 10-foot shelters/containers. The MK18 Self-Loading Ribbon Bridge Transportor/Container Handler is a hydraulically powered tilt bed rear body unit designed to load/offload ISO containers, ribbon bridge components or fill material without the assistance of material handling equipment.

STATUS

Approval for service use for the MK48 Front Power Unit and MK14 Container Hauler Rear Body Unit was obtained in July 1982. Approval for the MK17 Dropside Cargo variant was obtained in August 1983. A 5-year letter contract was signed in September 1983 for 1,686 total Logistics Vehicle Systems. The Logistics Vehicle System consisting of the MK48/14/17 began delivery to selected units in August 1985 with a subsequent initial operational capability (IOC) of March 1986. The MK18 R&D prototype testing commenced 3QFY88 and a Milestone III was held on 9 January 1990.

PROGRAM PLAN

Contract award for the MK18 is scheduled for February 1990.

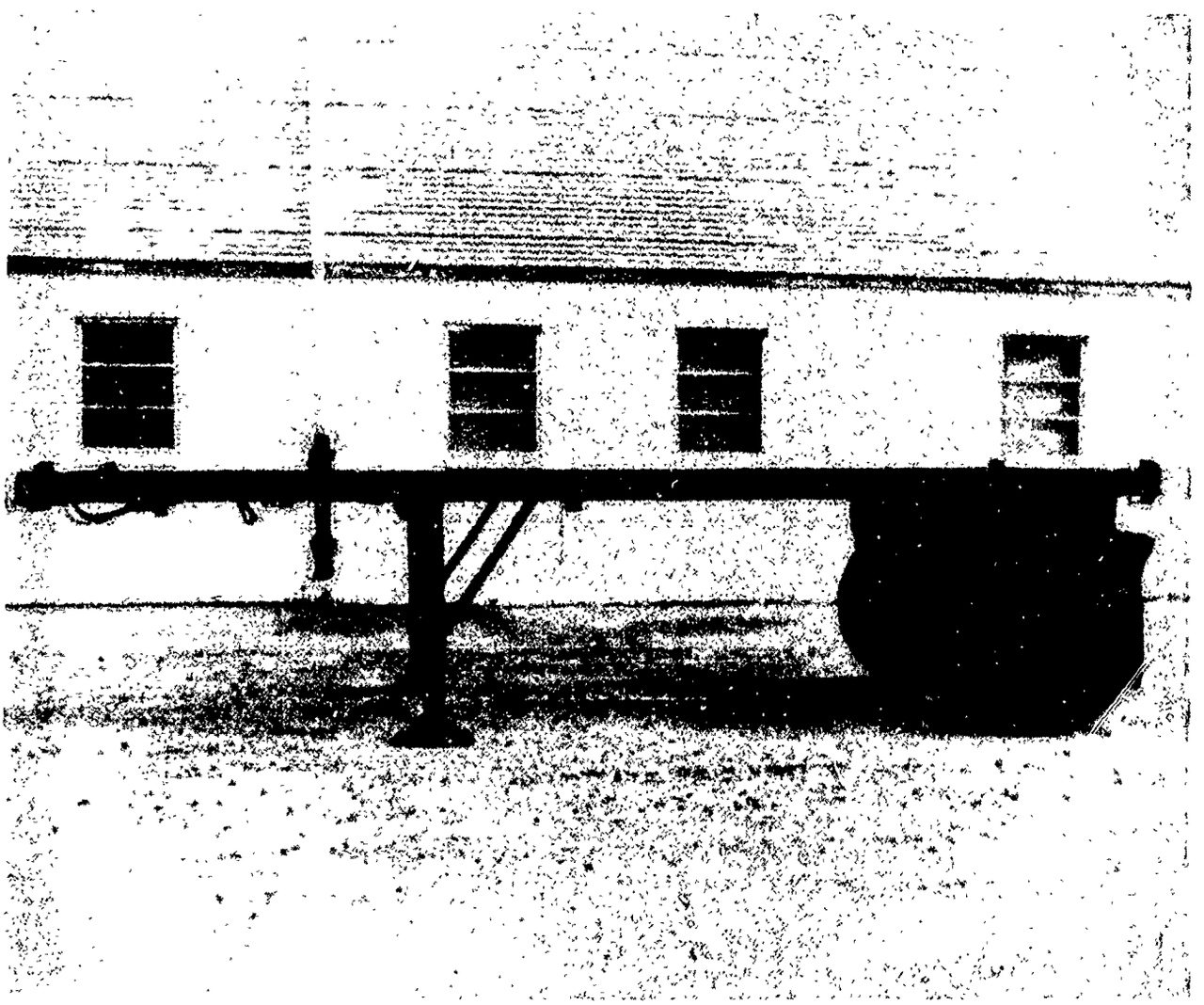
NSN

MK48: 2320-01-177-5167
MK14: 2320-01-176-0469
MK17: 2320-01-176-0468
MK18: Not assigned.

PART III

TRANSPORTATION EQUIPMENT

Chassis, Semitrailer: Coupleable, MILVAN Container Transporter



20-FOOT UNIT

SINGLE BOGIE
LENGTH: 242 INCHES
WIDTH: 96 INCHES
HEIGHT: 53.5 INCHES*
WEIGHT: 4,000 POUNDS

20-FOOT UNIT

DOUBLE BOGIE
LENGTH: 242 INCHES
WIDTH: 96 INCHES
HEIGHT: 53.5 INCHES*
WEIGHT: 5,850 POUNDS

40-FOOT UNIT

DOUBLE BOGIE
LENGTH: 484 INCHES
WIDTH: 96 INCHES
HEIGHT: 53.5 INCHES*
WEIGHT: 8,000 POUNDS

*HEIGHT WHEN UNLOADED AND SUPPORTED ON LANDING LEGS WITH DECK LEVEL

Chassis, Semitrailer: Coupleable, MILVAN Container Transporter

POINT OF CONTACT

W. Newell
US Army Tank-Automotive Command, AMSTA-FHS
Warren, MI 48397-5000
Autovon 786-6677/Commercial (313) 574-6677

ITEM DESCRIPTION

The MILVAN chassis was procured to attain a military owned, centrally controlled fleet for movement of military cargo over primary hard surface roads principally in CONUS. The chassis consists of a 20-foot frame, landing gear, and single-axle bogie. The bogie is movable along the length of the frame. The frame has provisions for coupling two 20-foot units to form a 40-foot chassis, with the bogies under the rear frame to form a tandem-axle configuration. Each frame has twist locks to accept ISO containers. There is provision for lowering the twist locks flush with the top of the frame so that 40-foot containers can be transported on a coupled chassis. The MILVAN chassis was competitively procured from industry utiiizing a performance military specification.

STATUS

The MILVAN chassis is currently deployed. From 1969-1971, 5,620 were procured; 1,479 are currently in inventory. A 4-year overhaul program for 700 units was begun in FY84, and was completed in December 1989.

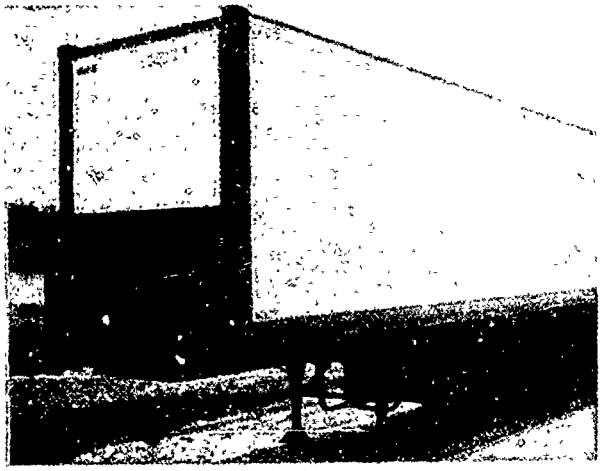
PROGRAM PLAN

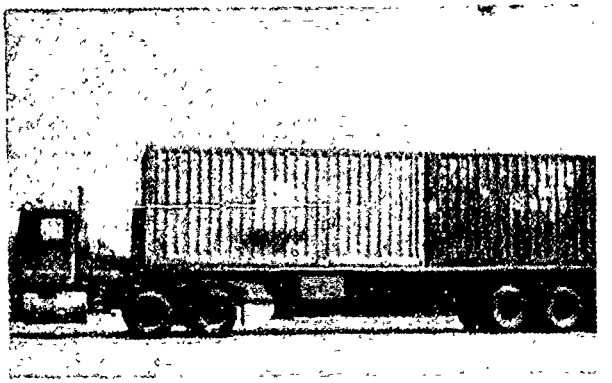
There is no current plan to procure additional units or initiate additional overhauls.

NSN

2300-00-168-2259

Semitrailer, Linehaul, Breakbulk/Container, M872 Series





CURB WEIGHT: 17,400 POUNDS
RATED PAYLOAD: 67,200 POUNDS
GROSS WEIGHT: 84,600 POUNDS
OVERALL LENGTH: 489 INCHES
OVERALL WIDTH: 96 INCHES
PLATFORM HEIGHT: 59 INCHES*
FIFTH WHEEL HEIGHT: 50 INCHES (LOADED)

TIRES: 10:00 X 20 TUBE TYPE
BRAKES: CAM/AIR
ELECTRICAL: 12/24 VOLT
LANDING GEAR: HAND/MECHANICAL
SIDE PANEL HEIGHT: 48 INCHES
CONTAINER LOCKS: 20 FEET, 35 FEET, 40 FEET, 24 FEET, 5 FEET, $6^{2}/_{3}$ FEET, AND 10 FEET

*HEIGHT WHEN UNLOADED AND SUPPORTED ON LANDING LEGS WITH DECK LEVEL

Semitrailer, Linehaul, Breakbulk/Container, M872 Series

POINT OF CONTACT

M. Musotto
US Army Tank-Automotive Command, AMCPM-TVH
Warren, MI 48397-5000
Autovon 786-8065/Commercial (313) 574-8065

ITEM DESCRIPTION

The M872 Semitrailer Series are commercial design flatbed semitrailers of 34-ton capacity used in the linehaul of containers, breakbulk cargo, and M113 Armored Personnel Carriers (APCs). The M915/M915A1 truck tractor is the prime mover.

STATUS

Procurement of the total requirement of 8,656 semitrailers was accomplished by five separate contracts as follows:

Model	Contractor	Quantity
M872	Theurer	1,364
M872	Southwest	1,304
M872A1	Theurer	2,713
M872A1	Heller	212
M872A2*	Theurer	125
M872A2*	Heller	125
M872A3	Southwest	2,813
		8,656 Total

* Model M872A2 has a tapered gooseneck configuration which has been modified by installing a saddle to the gooseneck.

All contracts are complete. All medium transportation companies have 100% fill of the M872.

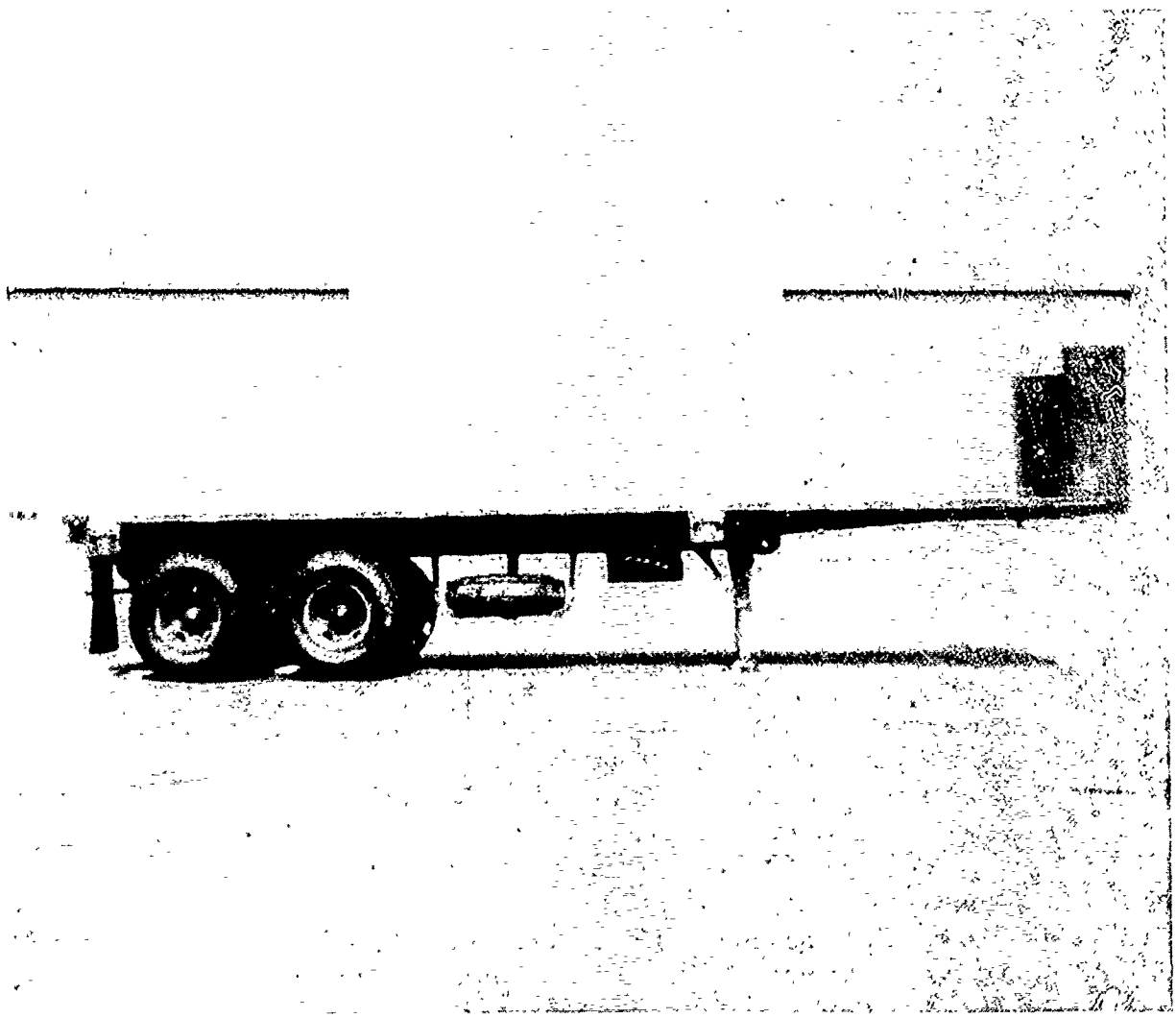
PROGRAM PLAN

Provide support for fielded items.

NSNs

M872: 2330-01-039-8059
M872A1: 2330-01-109-8006
M872A2: 2330-01-119-5837
M872A3: 2330-01-142-1385

Semitrailer, Tactical, Dual Purpose Breakbulk/Container Transporter, 22 1/2-Ton, M871 Series



RATED PAYLOAD: 44,800 POUNDS
OVERALL LENGTH: 358 INCHES
OVERALL WIDTH: 96 INCHES
PLATFORM HEIGHT: 55 INCHES*

TIRES: 11:00 X 20
ELECTRICAL: 12/24 VOLT
LANDING GEAR: HAND/MECHANICAL
CONTAINER LOCKS: 20 FEET, 10 FEET, 6 2/3 FEET, AND 5 FEET

*HEIGHT WHEN UNLOADED AND SUPPORTED ON LANDING LEGS WITH DECK LEVEL

Semitrailer, Tactical, Dual Purpose Breakbulk/Container Transporter, 22 1/2-Ton, M871 Series

POINTS OF CONTACT

M. Musotto
US Army Tank-Automotive Command, AMCPM-TVH
Warren, MI 48397-5000
Autovon 786-8065/Commercial (313) 574-8065

J. Hollem
US Army Tank-Automotive Command, AMCPM-TVH
Warren, MI 48397-5000
Autovon 786-7657/Commercial (313) 574-7657

ITEM DESCRIPTION

The M871 is a commercial design tactical semitrailer whose primary application will be the delivery and retrograde of ISO containers and shelters up to 20 feet long, and breakbulk cargo in an overseas theater of operation between the Corps General Support Supply Activities (GSSA) and the Division Support Command (DISCOM). On occasion it may also be used to deliver containers to forward distribution points or to using units. The prime movers in these roles will be the M818, M915, and M932 truck tractors. The tactical semitrailer will also be used on the linehaul mission as a means of clearing 20 foot or smaller containers from the port area. The prime mover in this role will normally be the M915 linehaul tractor.

STATUS

A flatbed configuration was selected by the Logistics Center in December 1977, after consideration was given to the conflicting requirements dictated by breakbulk and container transport mission. A 5-year multi-year contract was awarded to Southwest Truck Body in March 1979 for a quantity of 2,349 trailers. Initial Production Testing was completed in August 1980 and initial delivery to Anniston Army Depot for storage started in June 1980. The option was exercised to procure an additional unit with the missile tie-down fixtures. A contract for 246 M871A1s was awarded to Schoals American Industries, Inc., in 3QFY85. The vehicle completed Initial Production Testing in 3QFY88. A 3-year contract for the M871A2 was awarded in September 1988 to Dynaweld, Inc. for 1,089 units with 100% options per year.

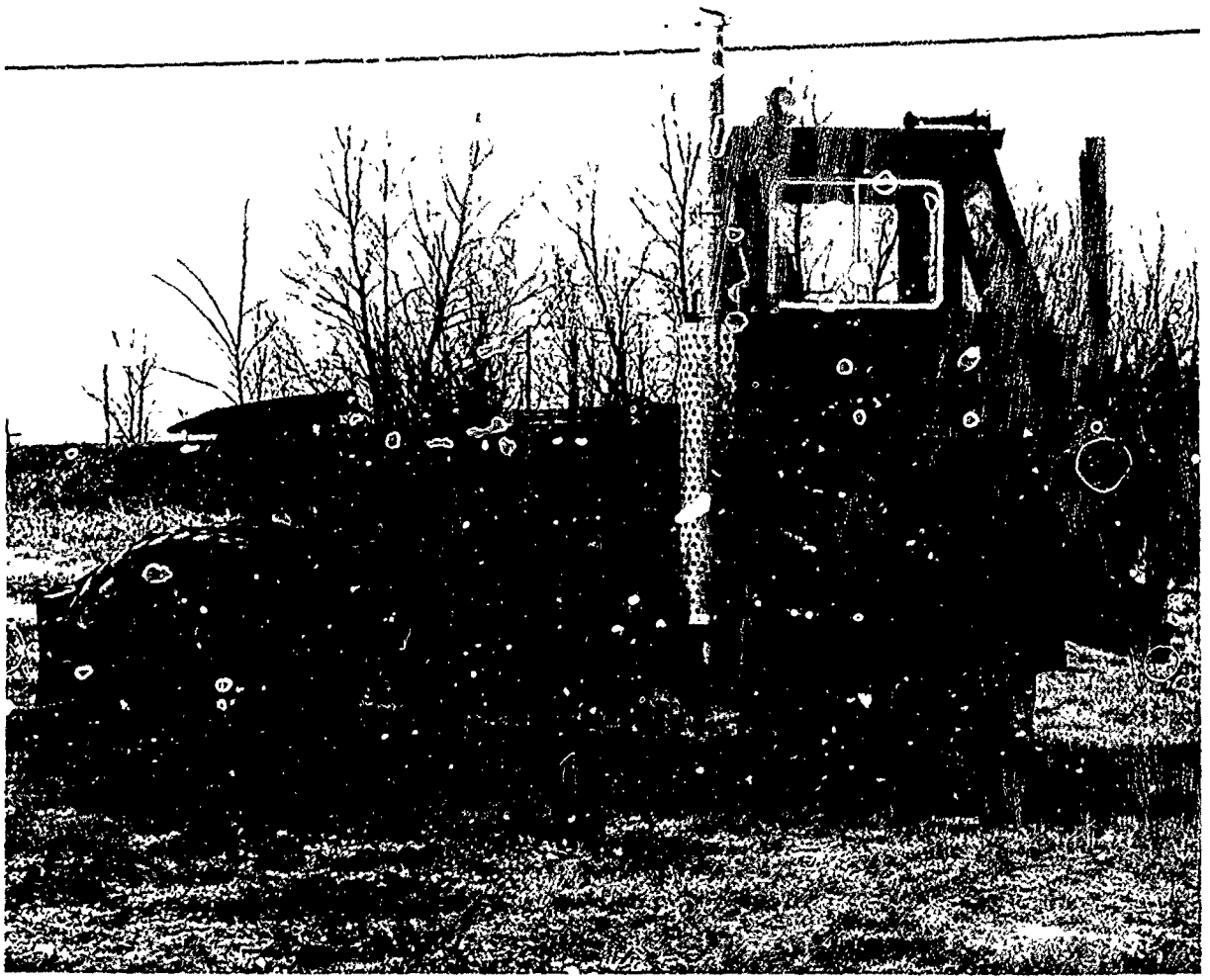
PROGRAM PLAN

Deployment of the M871A1 is planned to USAREUR and Army Interchange Customers with FUE expected in FY90. Initial Production Testing of the M871A2 is scheduled for September 1989 to July 1990 with delivery beginning August 1990 and FUE scheduled for September 1990.

NSNs

M871: 2330-00-122-6779
M871A1: 2330-01-226-0701
M871A2: Not assigned.

Truck Tractor, Yard Type, 4 x 2, M878A1



CURB WEIGHT: 16,280 POUNDS
OVERALL LENGTH: 182.5 INCHES
OVERALL WIDTH: 98.125 INCHES
OVERALL HEIGHT: 120 INCHES
WHEEL BASE: 116 INCHES
FIFTH WHEEL HEIGHT: 48 INCHES TO 64 INCHES

Truck Tractor, Yard Type, 4 x 2, M878A1

POINT OF CONTACT

J. Curtis
US Army Tank-Automotive Command, AMSTA-FTM
Warren, MI 48397-5000
Autovon 786-5225/Commercial (313) 574-5225

ITEM DESCRIPTION

The y type truck tractor is primarily used to provide a capability to shuttle semitrailers loaded with containers or breakbulk cargo within fixed ports, on prepared beaches, during Logistics-Over-the-Shore (LOTS), and in trailer transfer areas. The vehicle is a highly maneuverable commercial tractor with an automatic locking, hydraulic-lift fifth wheel which facilitates semitrailer coupling and disengagement, and allows movement of the semitrailer/chassis without retracting the landing legs. It is capable of moving vehicles weighing between 21,000 and 60,000 pounds.

STATUS

A total of 28 trucks was competitively procured from Ottawa Truck Company for use during Joint-Logistics-Over-the-Shore (J-LOTS) testing in 1977. Based on the favorable results of this test, 16 additional trucks were ordered. The truck passed First Article Tests, and a third buy contract was awarded to Ottawa Truck Company for a quantity of 175 trucks. Of these 175 vehicles, 56 were issued in 1983 to fill initial CONUS requirements. A full AR 700-34 release of the M878A1 was granted in October 1985. A total of 43 trucks have been deployed to USAREUR and nine deployed to Korea. The remaining vehicles are in long term storage and are planned for CONUS fieldings in FY90 to FY92.

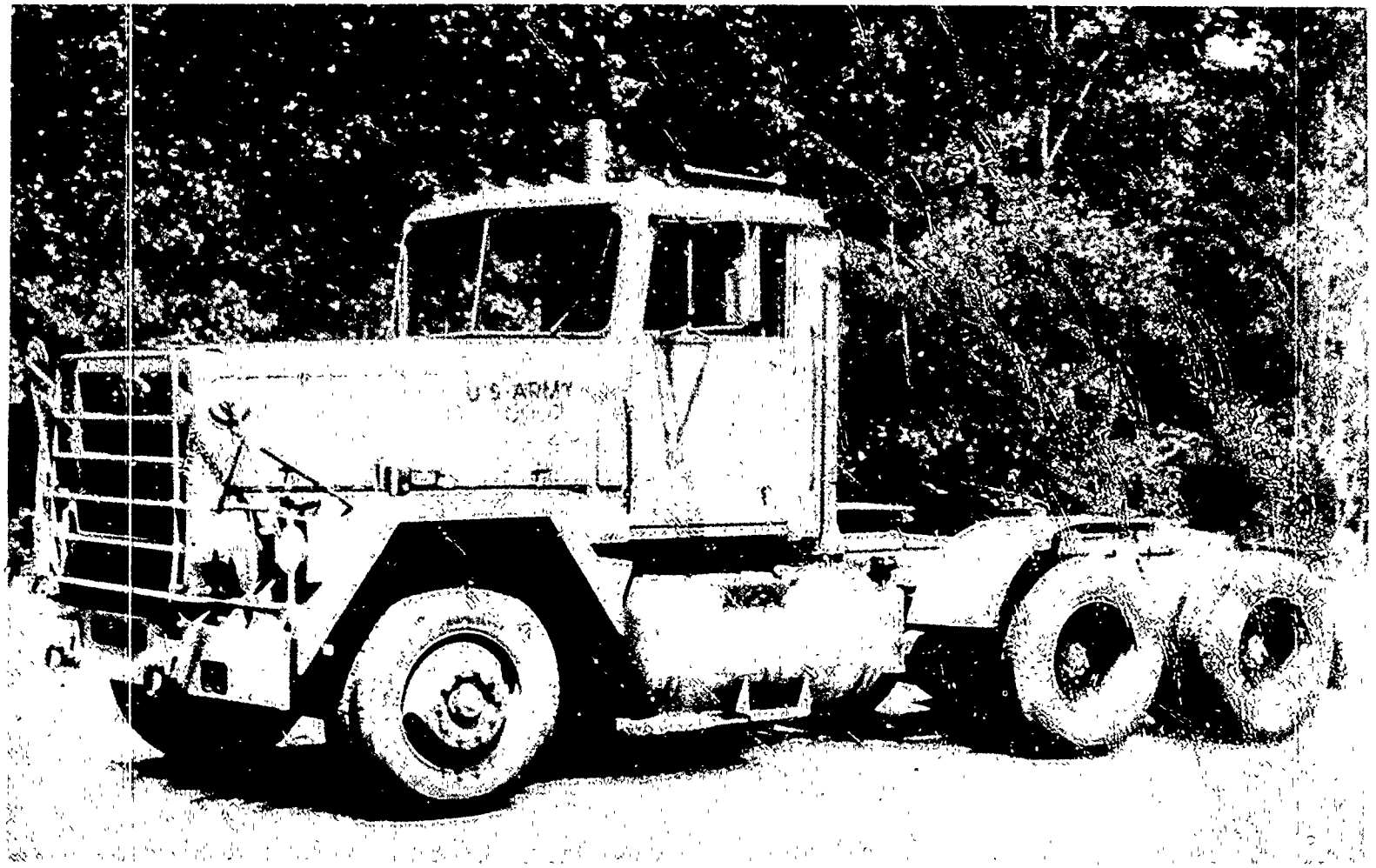
PROGRAM PLAN

Continue to fully support fielded vehicles. There are no current plans for additional procurements.

NSN

2320-01-121-2102

Truck Tractor, Linehaul, 6 x 4, M915



Truck Tractor, Linehaul 6 x 4, M915

POINT OF CONTACT

M. Musotto
US Army Tank-Automotive Command, AMCPM-TVH
Warren, MI 48397-5000
Autovon 786-8065/Commercial (313) 574-8065

ITEM DESCRIPTION

The M915 is the on-road prime mover for the M872 series Breakbulk/Container Transporter Semitrailer (105,000-pound Gross Combination Weight Rating) and is used in linehaul operations from the port of debarkation to the division rear boundary. It partially replaces or augments the M818/M931 5-ton Tactical Tractor fleet. The M915 is part of a single procurement action which fielded a six-vehicle family. The other vehicles within the combined procurement were the M916 Light Equipment Transporter, M920 Medium Equipment Transporter, M917 20-Ton Dump Truck, M918 Bituminous Distributor, and M919 Concrete Mobile.

STATUS

Initial production vehicles were satisfactorily tested at Aberdeen Proving Ground, MD; Yuma Proving Ground, AZ; Belvoir RD&E Center, VA; and the Cold Region Test Center, AK, during March 1978 through March 1979. Four vehicles with companion M872 semitrailers satisfactorily completed Force Development Test and Evaluation (FDTE) at Fort Campbell, KY, between January and April 1979. Production was completed in June 1980 and the entire fleet of 2,498 vehicles has been fielded.

PROGRAM PLAN

Provide support for fielded items.

NSN

2320-01-028-4395

Truck Tractor, Linehaul, 6 x 4, M915A1/M915A2

Truck Tractor, Linehaul 6 x 4, M915A1/M915A2

POINT OF CONTACT

M. Musotto
US Army Tank-Automotive Command, AMCPM-TVH
Warren, MI 48397-5000
Autovon 786-8065/Commercial (313) 574-8065

ITEM DESCRIPTION

The M915A1 is a military adaption of a commercial 6 x 4 tractor and is a rebuy of the M915. It has been improved to include state-of-the-art advances in heavy truck technology. It is intended for linehaul operation from the port of debarkation to the division rear boundary. While the M915A1 is used primarily with the M872 series semitrailers, it is capable of operating with a variety of military and commercial trailers.

The M915A2 is a later version of the M915A1. It has a dual purpose of being the prime mover for the M1062, a 7,500 gallon petroleum tanker, as well as the M872 semitrailers.

STATUS

AM General produced 2,342 M915A1s. Deployment to USAREUR, US Army Reserves, and Army National Guard was made between August 1983 and July 1984 to 37 Medium Transportation Companies.

In September 1988, a contract was awarded to Freight Liner Corp. to produce the M915A2 tractor. This contract was for 633 with options for more. Initial Production tests are currently in progress.

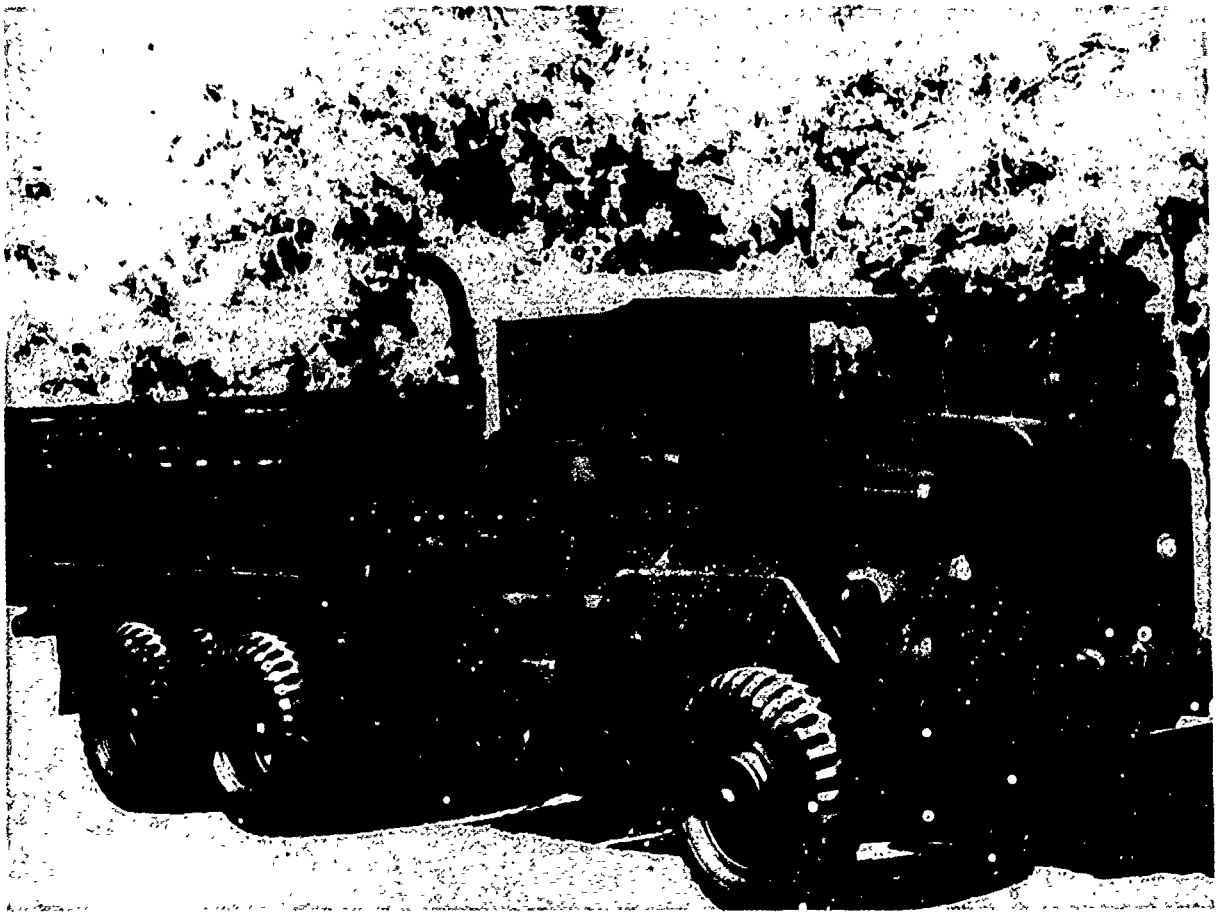
PROGRAM PLAN

Initial Production testing on the M915A2 tractor is scheduled to be completed in April 1990. Provide support for fielded items and field additional tractors.

NSNs

M915A1: 2320-01-272-5029
M915A2: 2320-01-028-4396

5-Ton Truck Bed with ISO-Configured Locking Devices



5-Ton Truck Bed with ISO-Configured Locking Devices

POINT OF CONTACT

1st LT J. Mayles
CG, Marine Corps RD&A Command, Code SSCMT
Washington, DC 20380-0001
Autovon 226-1154/Commercial (202) 696-1154

ITEM DESCRIPTION

The ISO-configured truck bed is a modification that will be installed on 5-ton trucks to facilitate the transport of ISO-configured containers. The 14-foot bed will transport two SIXCON containers while the 20-foot bed will transport one 20-foot long ISO container or two 10-foot long ISO containers.

STATUS

A letter contract was awarded during June 1988.

PROGRAM PLAN

Definitization of the contract should be completed by February 1990 and will be for 1,240 5-ton truck beds. Shipment of the beds will commence by 4QFY90. The truck beds will be delivered to the 5th echelon depots where the beds will be placed on the trucks during the inspect and repair program. Plans are to outfit all of the Marine Corps 5-ton trucks over the next 5 years.

NSN

Not assigned.

Railway Car, Flat (Heavy Duty), 150-Ton Capacity, DS

Railway Car, Flat (Heavy Duty), 150-Ton Capacity, DS

POINT OF CONTACT

R. Smith
US Army Belvoir RD&E Center, STRBE-FMT
Fort Belvoir, VA 22060-5606
Autovon 354-5581/Commercial (703) 664-5581

ITEM DESCRIPTION

The 150-ton flat car is designed for unrestricted interchange use while transporting both oversized tracked vehicles and multiple ANSI/ISO containers loaded with Class A explosives and other commodities. Of welded construction, the all-steel car is equipped with integral securement systems to restrain both kinds of lading. For intermodal containers, the securement system accommodates a single 40-foot container, three 20-foot containers or a combination of both sizes. The tiedown units are of the pedestal type that lock automatically when the container is set in place and released automatically when the containers are lifted. The flat car is approximately 68 feet long; 10 feet, 5 inches wide; and is supported by two three-axle trucks. The car is designed to carry up to a 150-ton load.

STATUS

Four production contracts yielding 574 cars have been completed.

PROGRAM PLAN

Procurement of 40 additional cars is planned for FY90 and will constitute a buy-out of mission requirements.

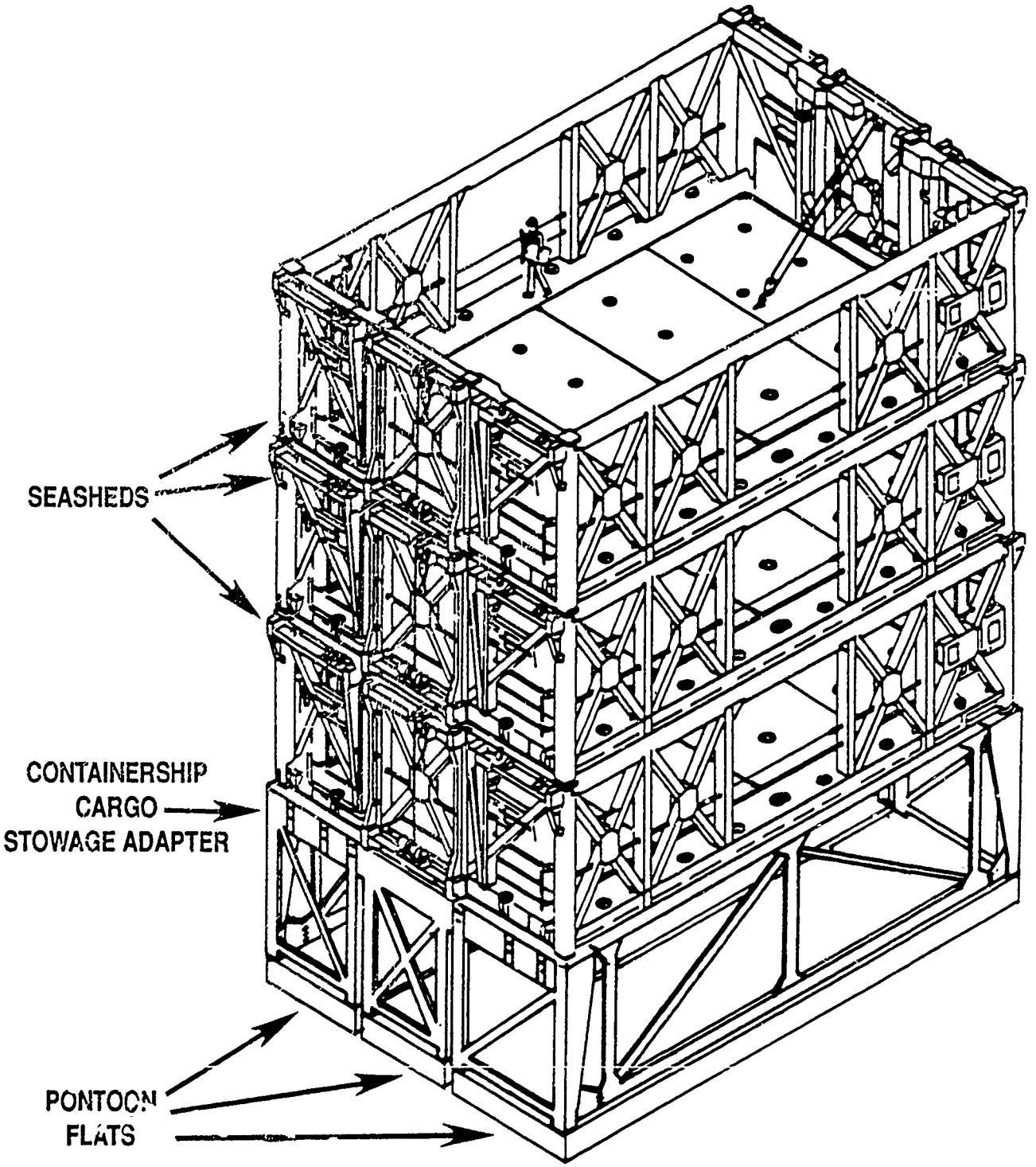
NSN

2220-01-058-6377

PART IV

LOTS, HARBOR, AND CONTAINER OFFLOADING AND TRANSFER EQUIPMENT

SEASHED System



SEASHED System

POINT OF CONTACT

M. Baig
Naval Sea Systems Command, PMS 377 V
Washington, DC 20362-5101
Autovon 332-7881/Commercial (703) 602-7881

ITEM DESCRIPTION

The SEASHED System consists of a stack of up to three SEASHEDs on a Container Ship Cargo Stowage Adapter (CCSA).

SEASHEDs are open-topped large cargo containers that fit into the container cells of a containership to provide the capability to carry large, heavy or outsized cargo such as Army and Marine Corps tanks and helicopters. Each SEASHED occupies the space of three 40-foot containers in width and has the overall height of 1-1/2 containers, having dimensions of 25 feet wide, 40 feet long, and 12-1/2 feet high. The maximum cargo capacity of each SEASHED is 220,000 pounds. Each SEASHED weighs 76,000 pounds. The floor of the SEASHED opens to allow cargo to be lowered through to the SEASHED or CCSA below. The clear opening of the floor is 30 feet x 18 feet. The CCSA has two elements, the adapter frame and three pontoon flats which provide the same storage capability of a SEASHED. The quantity to be procured is to satisfy contingency logistics requirements for heavy lift shipment via Ready Reserve Force (RRF), US Flag, and allied containerships.

STATUS

Approximately 784 SEASHED and 249 CCSA units have been delivered as of December 1989. The current budget shows a total of 1,058 SEASHED units and 359 CCSA units. The inventory is at three storage locations: MOT, Bayonne, NJ; NWS; Charleston, SC; and Port Hueneme, CA.

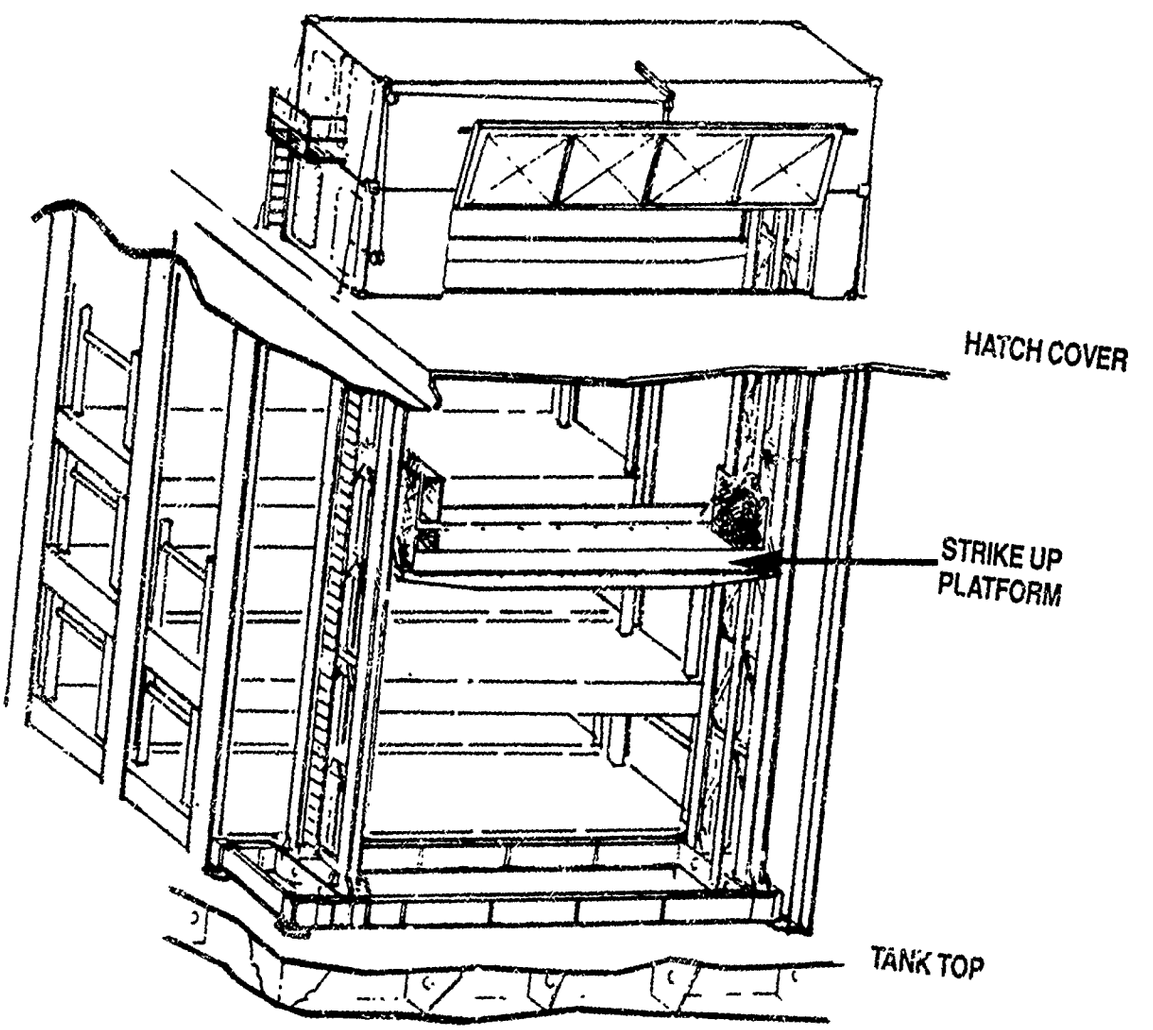
PROGRAM PLAN

Continue receiving units ordered under 1989 contracts.

NSN

Not assigned.

Containership Strikeup System (CSUS)



Containership Strikeup System (CSUS)

POINT OF CONTACT

M. Fink
Naval Sea Systems Command, PMS-377K
Washington, DC 20362-5101
Autovon 332-4834/Commercial (703) 602-4834

ITEM DESCRIPTION

The Containership Strikeup System (CSUS) is a modular elevator system designed to fit in one cell of a containership. The system is composed of modular sections that allows the system to fit in holds from three to six containers deep. The system penetrates the hatch cover on which the access module and machinery module rest. The weight of that portion of the system below the hatch cover rests on the container hard points. Lift capacity of the system is 20,000 pounds The CSUS can be used in conjunction with flatracks and SEASHEDs to provide temporary *'tween decks* for stowage and athwartships movement of cargo. In this concept, the cargo will be broken out at sea (anchored or underway), struck up by the CSUS, and transferred at sea by a STREAM rig.

STATUS

First-article design, production, and test contract was awarded. Land based tests of the first article were completed by the end of FY86.

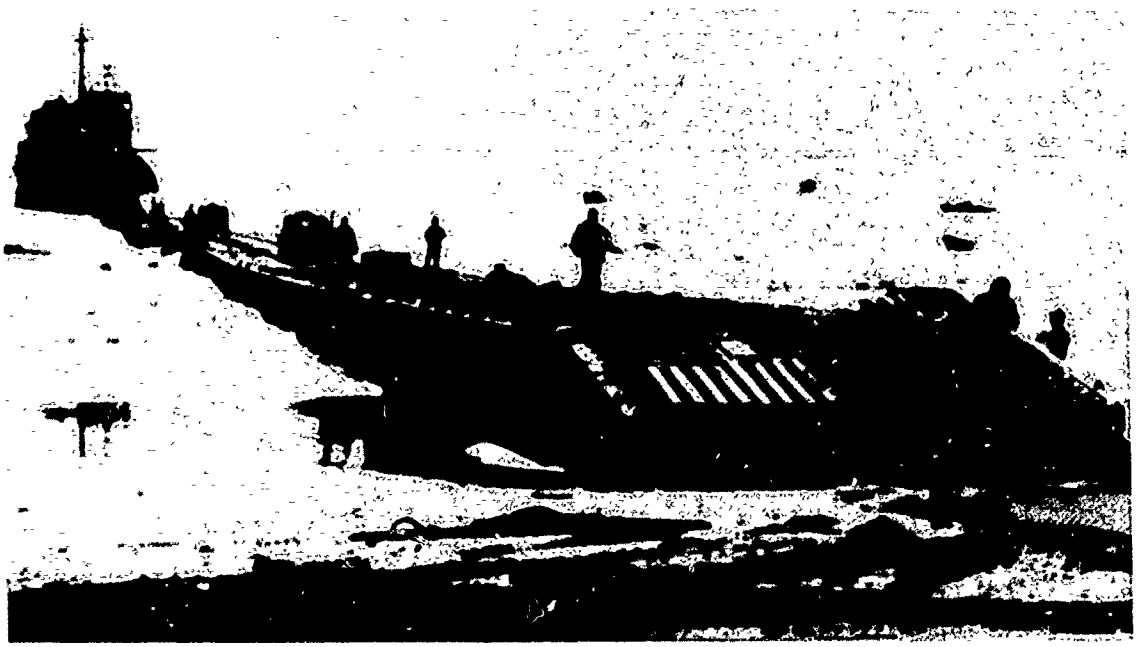
PROGRAM PLAN

No current plans for follow-on production.

NSN

Not assigned.

Floating Causeway (FC)



Floating Causeway (FC)

POINTS OF CONTACT

B. Oh
US Army Belvoir RD&E Center, STRBE-FMS
Fort Belvoir, VA 22060-5606
Autovon 354-5319/Commercial (703) 664-5319

G. Walker
Naval Facilities Engineering Command, Code 061A
Alexandria, VA 22332
Autovon 221-8535/Commercial (703) 325-8535

ITEM DESCRIPTION

The Floating Causeway (FC) consists of 17 to 19 causeway sections. When connected end-to-end, the Floating Causeway will extend approximately 1,530 feet from the shore. The inshore section will be fitted with fold-down ramps on one end to allow off-loading of vehicular traffic. The offshore section (frequently called "B" or "Sea" section), will have an end adapter for marriage to the LCU, bits for mooring lines, and a rhino horn to mate with the LCU bow ramp. An anchor mooring system will be utilized to counter sea conditions. Two Side Loadable Warping Tugs (SLWTs) are used to move, position, and tender the causeway sections, and to set and remove the anchors. Additionally, two bulldozers are required to assist in the beach preparation and to beach the causeway sections.

STATUS

The FC facility was granted type classification Limited Procurement Urgent (LPU) in the 21 March 1985 Milestone I and II (IPR) for this system. Standard Code A Type Classification for the FC by the Army is contingent upon resolution of TRADOC issues surfaced at the IPR. The Army awarded a contract in June 1989 to Robishaw for 35 modular sections. Each causeway section being procured is 24 feet by 80 feet and is made up of six 20 foot by 8 foot and three 40 foot by 8 foot modules.

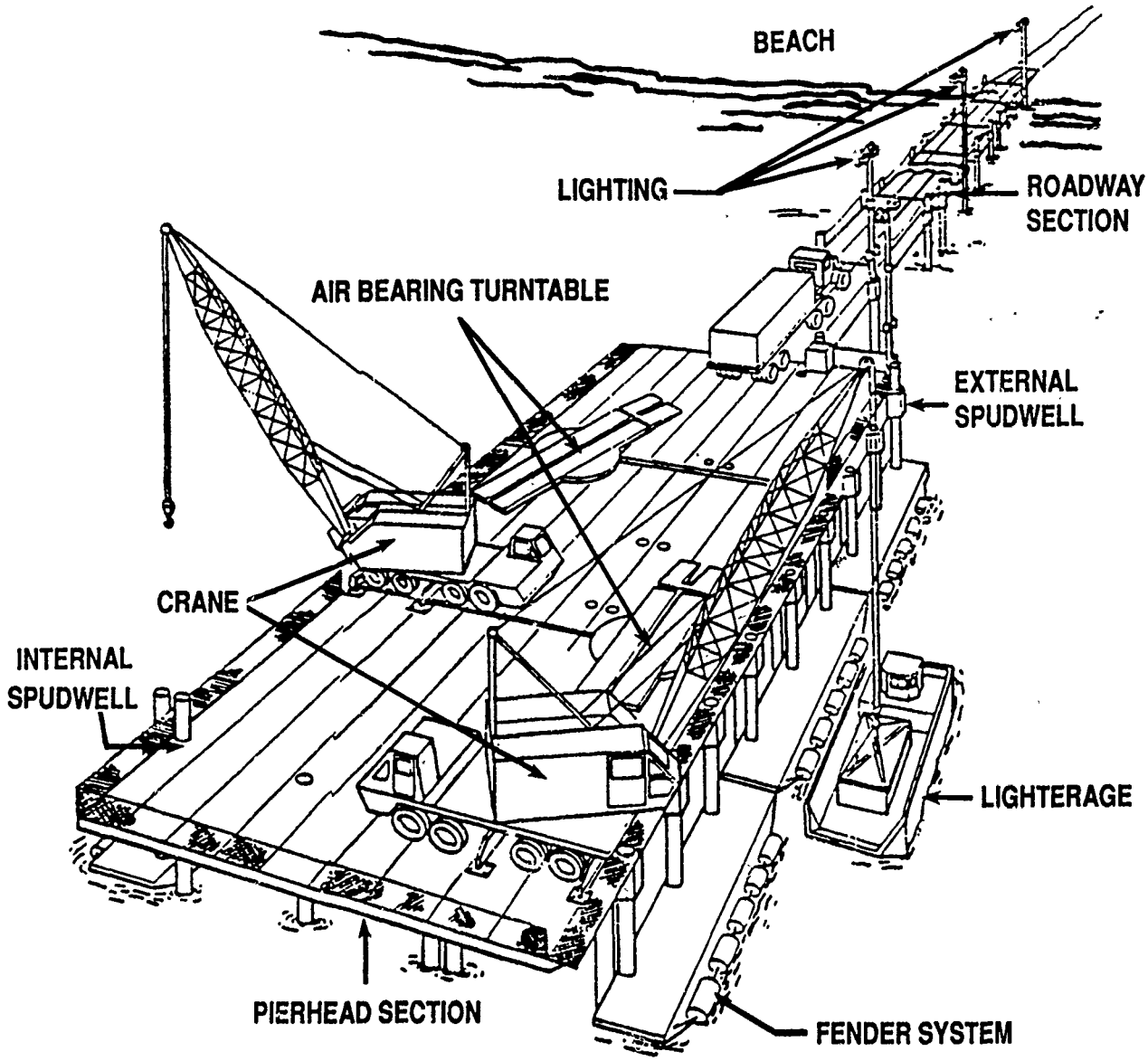
PROGRAM PLAN

Floating Causeway hardware is being procured under multiple Navy and Army procurement contracts. Army Initial Operation Capability (IOC) is expected by 4QFY90.

NSN

1945-01-218-7268

Elevated Causeway, Modular (ELCAS (M))



Elevated Causeway, Modular (ELCAS (M))

POINTS OF CONTACT

B. Oh
US Army Belvoir RD&E Center, STRBE-FMS
Fort Belvoir, VA 22060-5606
Autovon 354-5319/Commercial (703) 664-5319

G. Walker
Naval Facilities Engineer Command, Code 061A
Alexandria, VA 22332
Autovon 221-8535/Commercial (703) 325-8535

ITEM DESCRIPTION

The Elevated Causeway, Modular (ELCAS (M)) is a modular pier facility, composed of container-compatible modules, providing an interface between displacement craft carrying containers and the beach. The ELCAS (M) will have a nominal length of up to 3,000 feet, as required, to reach a 20-foot water depth at the pierhead and is 15 feet above the mean low water level. The pierhead will be 72 feet wide by 240 feet long. The two long sides of the pierhead will have a fendering system to accommodate unscathed, lighter interface. The ELCAS (M) is constructed by erecting initial section(s) and mounting a construction crane on top of them. Subsequent sections will be cantilevered from the previously erected sections and secured in place with piles. The ELCAS (M) section measures 24 x 40 feet, consisting of three ISO pontoons, each measuring 40 x 8 x 4.5 feet. Emplaced on the ELCAS (M) pierhead are two vehicle turntables for truck turnarounds which are supported by 48-inch air bearings. Two container-handling cranes will be stationed on the ELCAS (M) pierhead to transfer cargo from lighters to container handling vehicles for subsequent transport to shore. The constructed ELCAS (M) will be equipped with a lighting system. Side-Loadable Warping Tugs will be used to install, maintain, and retrieve the ELCAS (M) system.

STATUS

An Army Operational and Organizational (O&O) Plan for the Elevated Causeway (ELCAS) was approved by the CG, TRADOC, on 9 August 1985. A draft Operational Requirement (OR) for the ELCAS (M) has been prepared by the Naval Facilities Engineering Command, and will be reviewed by the Army to determine compliance with Army Regulations.

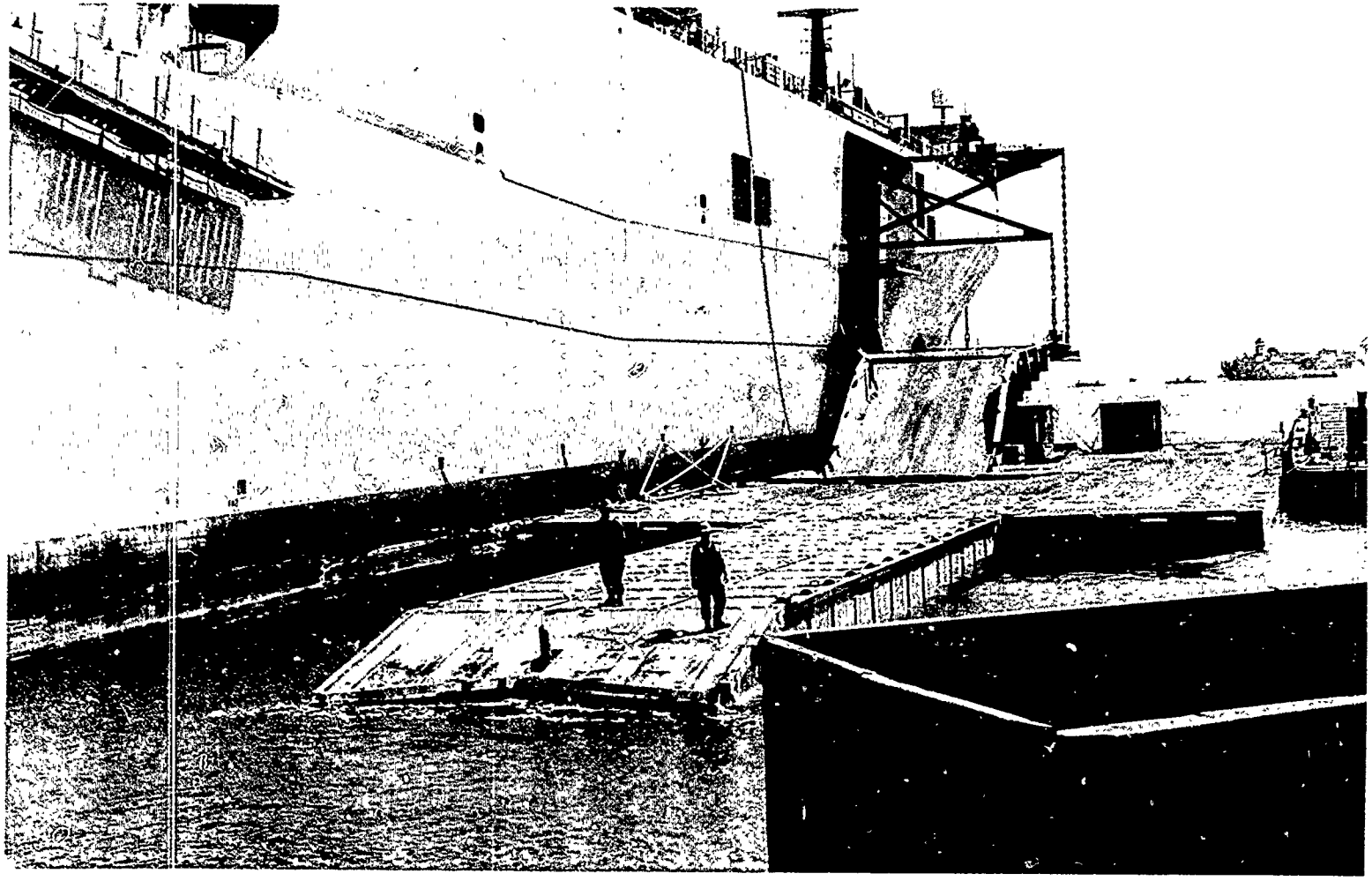
PROGRAM PLAN

The Army may procure two ELCAS (M) systems, starting in FY94. The Navy may procure three ELCAS (M) systems, two in FY91 and one in FY95.

NSN

Not assigned.

Roll-On/Roll-Off Discharge Facility (RO/RO DF)



Roll-On/Roll-Off Discharge Facility (RO/RO DF)

POINTS OF CONTACT

B. Oh
US Army Belvoir RD&E Center, STRBE-FMS
Fort Belvoir, VA 22060-5606
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G. Walker
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Alexandria, VA 22332
Autovon 221-8535/Commercial (703) 325-8535

T. Vaughters
David Taylor Research Center, DTRC-125
Annapolis, MD 21402-5067
Autovon 281-2261/Commercial (301) 267-2261

ITEM DESCRIPTION

The primary portion of the Roll-On/Roll-Off Discharge Facility (RO/RO DF) consists of six 90-foot x 21-foot causeway sections. Each section is composed of 45 standard P-Series (MIL-P-19380) watertight pontoons (5 x 7 x 5 feet) bolted together in 3 rows of 15 pontoons. The RO/RO DF will be approximately 180 feet long by 65 feet wide. A seventh causeway section, frequently called "B" or "Sea" section, is added to the end of the RO/RO DF for marriage with the Landing Craft Utility. The RO/RO DF includes a Calm Water Ramp (CWR), which provides an interface between RO/RO ships without their own integral ramp and Army and Navy lighters. The CWR is normally 120 x 14 x 10 feet. The RO/RO DF will have a lighting and fendering system. Side-Loadable Warping Tugs (SLWTs) will be used to install, maintain, and retrieve the RO/RO DF in cargo transfer operations. The SLWT will consist of a complete Waterjet Propulsion Assembly (WPA) connected to a pontoon structure, ten pontoons long by three pontoons wide, and equipped with a deck-mounted winch, an A-frame, and a stern anchor.

STATUS

A RO/RO DF was granted type classification Limited Procurement Urgent (LPU) in the 21 March 1985 Milestone I and II In-Process Review (IPR) for this system. Standard A type classification for the RO/RO DF by the Army is contingent upon resolution of TRADOC issues surfaced at the IPR. Research is underway to determine concepts for Sea State 3 discharge capability.

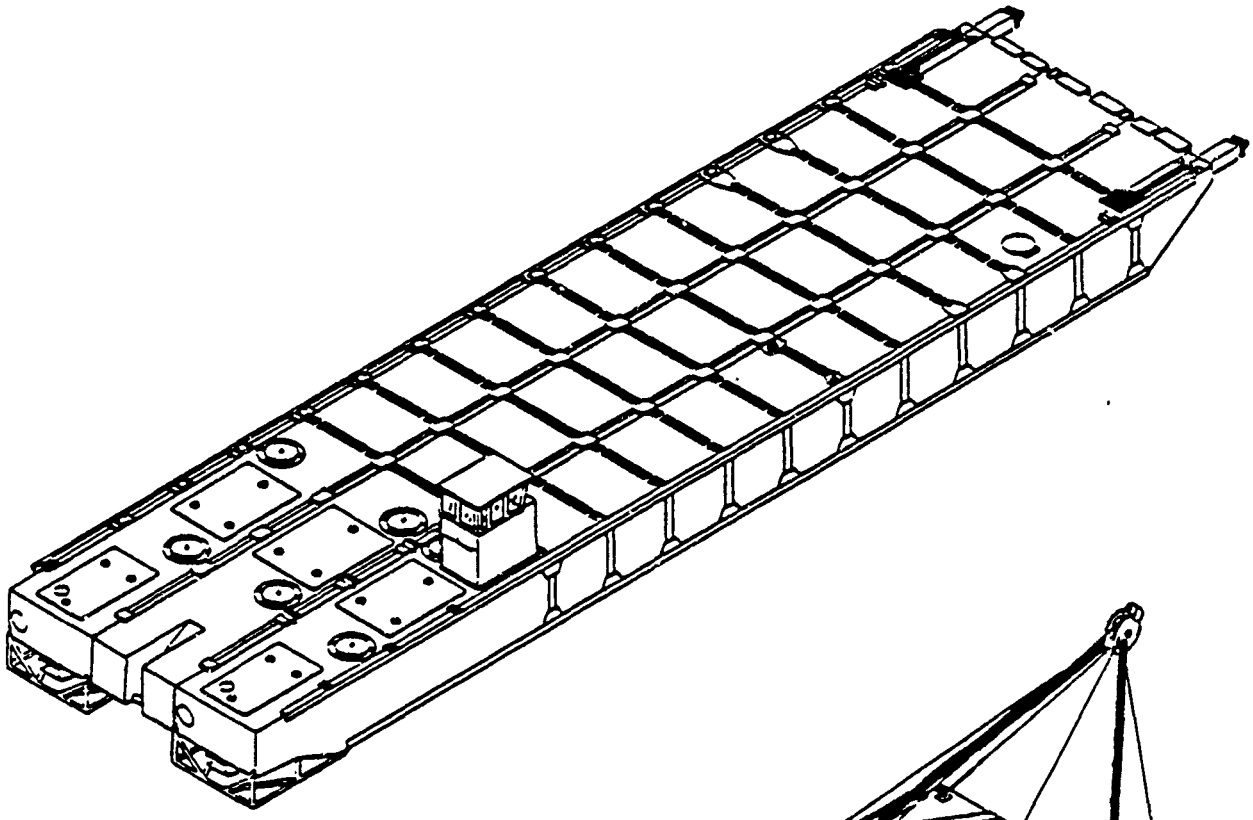
PROGRAM PLAN

Three RO/RO DF systems will be procured by the Army in FY90-93. Initial procurement of a RO/RO DF system will occur during FY90. Army Initial Operational Capability (IOC) is expected by 3QFY90.

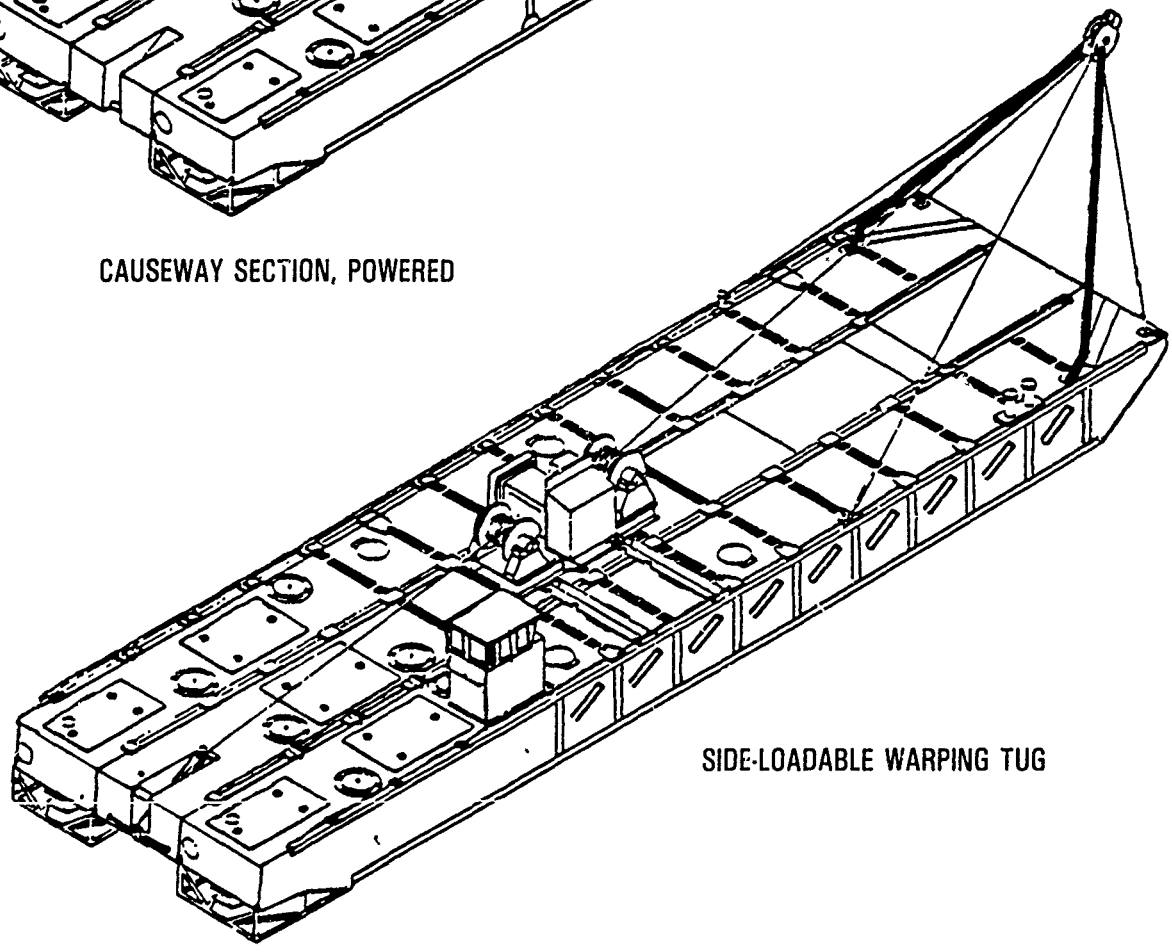
NSN

1945-01-219-2109

Causeway Section, Powered (CSP)



CAUSEWAY SECTION, POWERED



SIDE-LOADABLE WARPING TUG

Causeway Section, Powered (CSP)

POINTS OF CONTACT

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Naval Facilities Engineer Command, Code 061A
Alexandria, VA 22332
Autovon 222-8535/Commercial (703) 325-8535

B. Karrh
Naval Civil Engineering Laboratory, NCEL-L65
Port Hueneme, CA 93043-5003
Autovon 551-1332/Commercial (805) 982-1332

ITEM DESCRIPTION

The Causeway Section, Powered (CSP) Navy Lighterage (NL) version will be procured by the Army through the Navy. The NL version of the CSP and the Side Loadable Warping Tug (SLWT) are shown. The NL versions are constructed with 5 x 5 x 7-foot NL pontoons and three Waterjet Propulsion Assemblies. Propulsion modules consist of a drive engine and a waterjet pump system. The SLWT can be side carried on a Landing Ship Tank (LST). The CSP can carry 40 tons of cargo and is used to push causeway ferries. A causeway ferry consists of a CSP and Causeway Sections, Non Powered (CSNPs). Each CSNP carries 100 tons of cargo.

STATUS

The Navy awarded a contract in 4QFY87 to Costal Engineering and Manufacturing Co. for 37 SLWT/CSP NL version units. A contract to procure 11 additional units was awarded in 4QFY89.

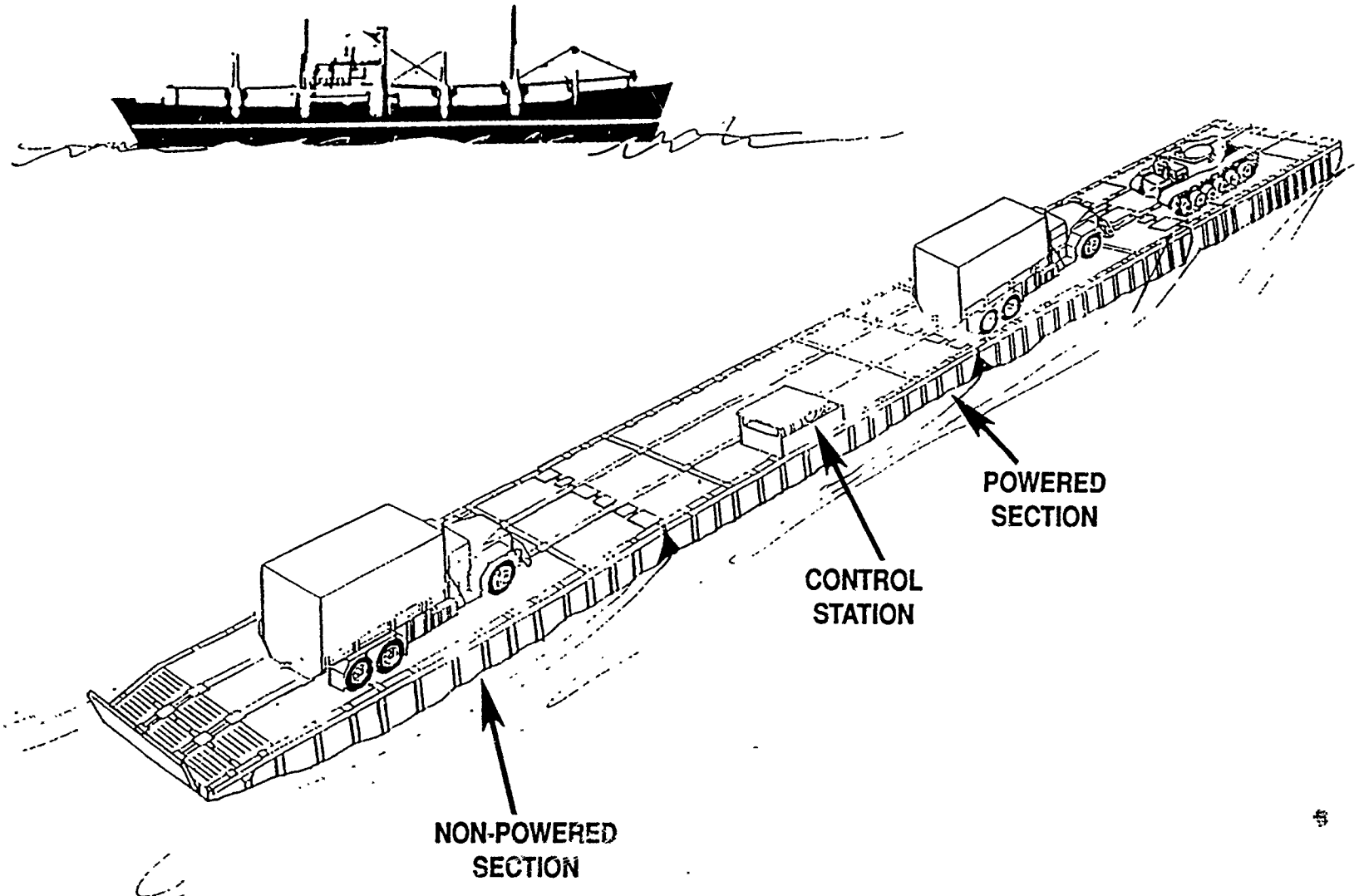
PROGRAM PLAN

Monitor contract and field the delivered units. Delivery of the SLWT/CSP NL version units is planned for 3Q or 4QFY90.

NSNs

CSP: 1945-01-213-7235
SLWT: 1945-01-218-4669

Causeway Ferry (CF)



Causeway Ferry (CF)

POINTS OF CONTACT

B. Oh
US Army Belvoir RD&E Center, STRBE-FMS
Fort Belvoir VA 22060-5606
Autovon 354-5319/Commercial (703) 664-5319

ITEM DESCRIPTION

The Causeway Ferry (CF) consists of a powered section and three non-powered sections, joined end-to-end. With a load capacity of 100 short-tons for each non-powered section and 50 short-tons for the powered section, a Causeway Ferry will be capable of carrying 350 short-tons of cargo at approximately 12 inches freeboard. Powered sections are composed of several propulsion modules with inherent propulsion subsystems and a control station. The system will operated in the movement of RO/RO cargo and containers. Upon arrival in the objective area, sections will be unloaded and assembled into the appropriately sized system. Each system will be provided with necessary communication equipment, permitting communications between the operator and his forward lookout, and between the operator, commercial ships, and the lighter control center.

STATUS

An Army Operational and Organizational (O&O) Plan has been approved for the Causeway Ferry.

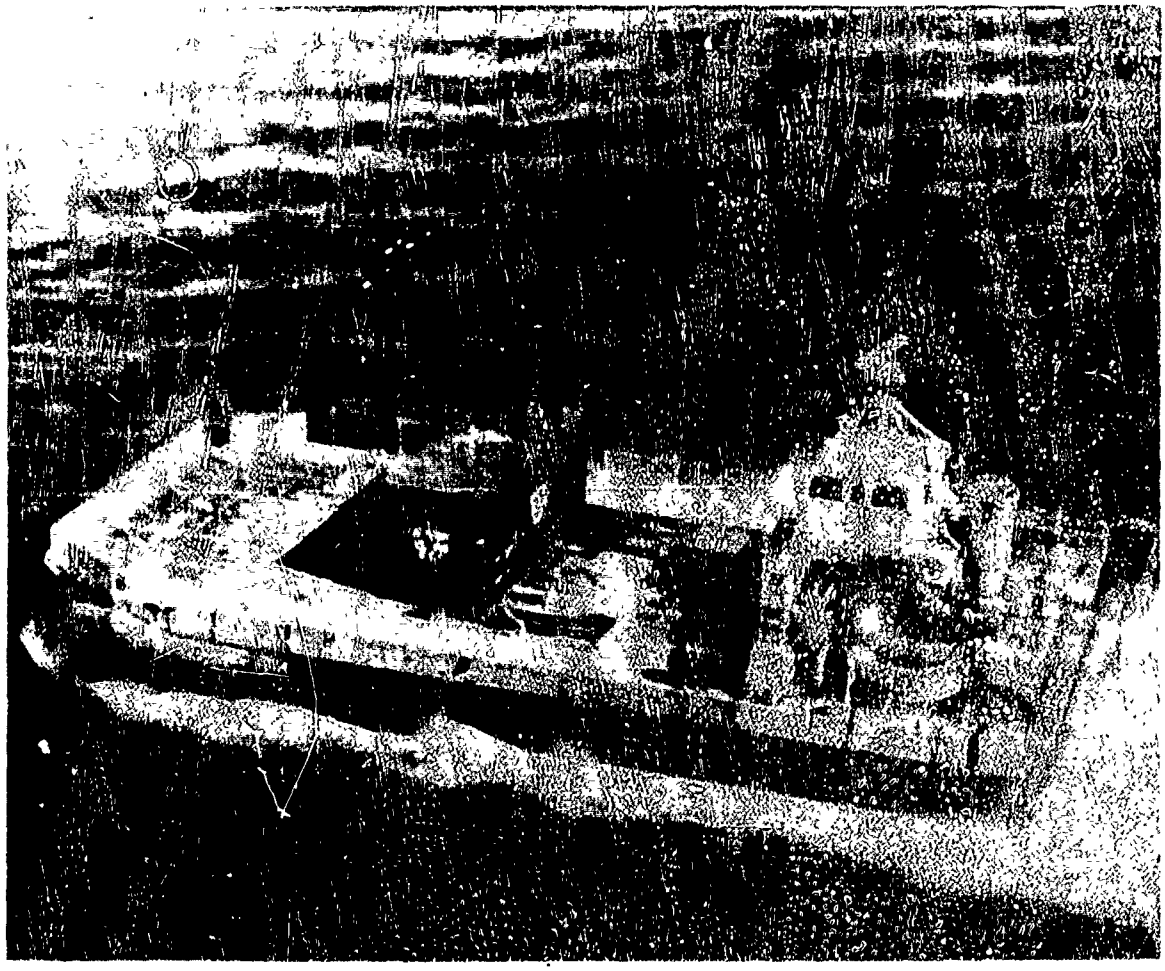
PROGRAM PLAN

The Army will pursue a Non-Developmental Item (NDI) acquisition strategy for the Causeway Ferry. Three Causeway Ferry systems will be procured by the Army in FY92. Total of 16 Causeway Ferry systems have been identified in the Army Watercraft Requirements Master Plan (AWRMP).

NSN

1990-01-280-3692

Lighter Air Cushion Vehicle, 30-Ton (LACV-30)



LENGTH: 76 FT 3 IN
WIDE: 36 FT 8 IN
DECK LENGTH: 51 FT 6 IN
DECK WIDTH: 32 FT 6 IN
HEIGHT (HOVERING): 28 FT 11 IN
CARGO DECK HEIGHT: 3 FT 11.5 IN

DESIGN GROSS WEIGHT: 57,344 LB
SPEED AT MAX CONTINUOUS POWER:
40 MPH AT ALL-UP WEIGHT
ENDURANCE: APPROX 5 HRS OF
LOGISTICS-OVER-THE-SHORE WITH
25 TON PAYLOAD

Lighter Air Cushion Vehicle, 30 [illegible]n (LACV-30)

POINT OF CONTACT

J. Walter
US Army Belvoir RD&E Center, STRBE-FMD
Fort Belvoir, VA 22060-5606
Autovon 354-5498/Commercial (703) 664-5498

ITEM DESCRIPTION

This vehicle is a military adaption of the Bell Aerospace Company air cushion vehicle *Voyageur* for use primarily in Logistics-Over-the-Shore (LOTS) operations. It is used to provide the logistical system with a rapid lift capability of moving cargo and equipment over water, marsh areas, beaches, ice, snow, and land. The LACV-30 provides a method of augmenting congested port facilities or replacing lost or reduced port capabilities. The LACV-30 is also intended to support secondary missions such as coastal, harbor, inland waterway operations, support of amphibious operations, ship-to-shore operations, transport operations, and search and rescue operations. The LACV-30 can negotiate Sea State 2 and 8-foot plunging surf.

STATUS

Two prototype craft were built and successfully passed operational and developmental tests. The LACV-30 was subsequently type classified. Twenty-four production craft have been built under two separate contracts with Bell Aerospace. The first 12 craft were assigned to the 331st Transportation Company and the second 12 craft to the 8th Transportation Company. All of the LACV-30s are stationed at Fort Story, VA. The last craft was delivered in 1986. There are ongoing Product Improvement Programs (PIPs) to improve operational capabilities and maintainability.

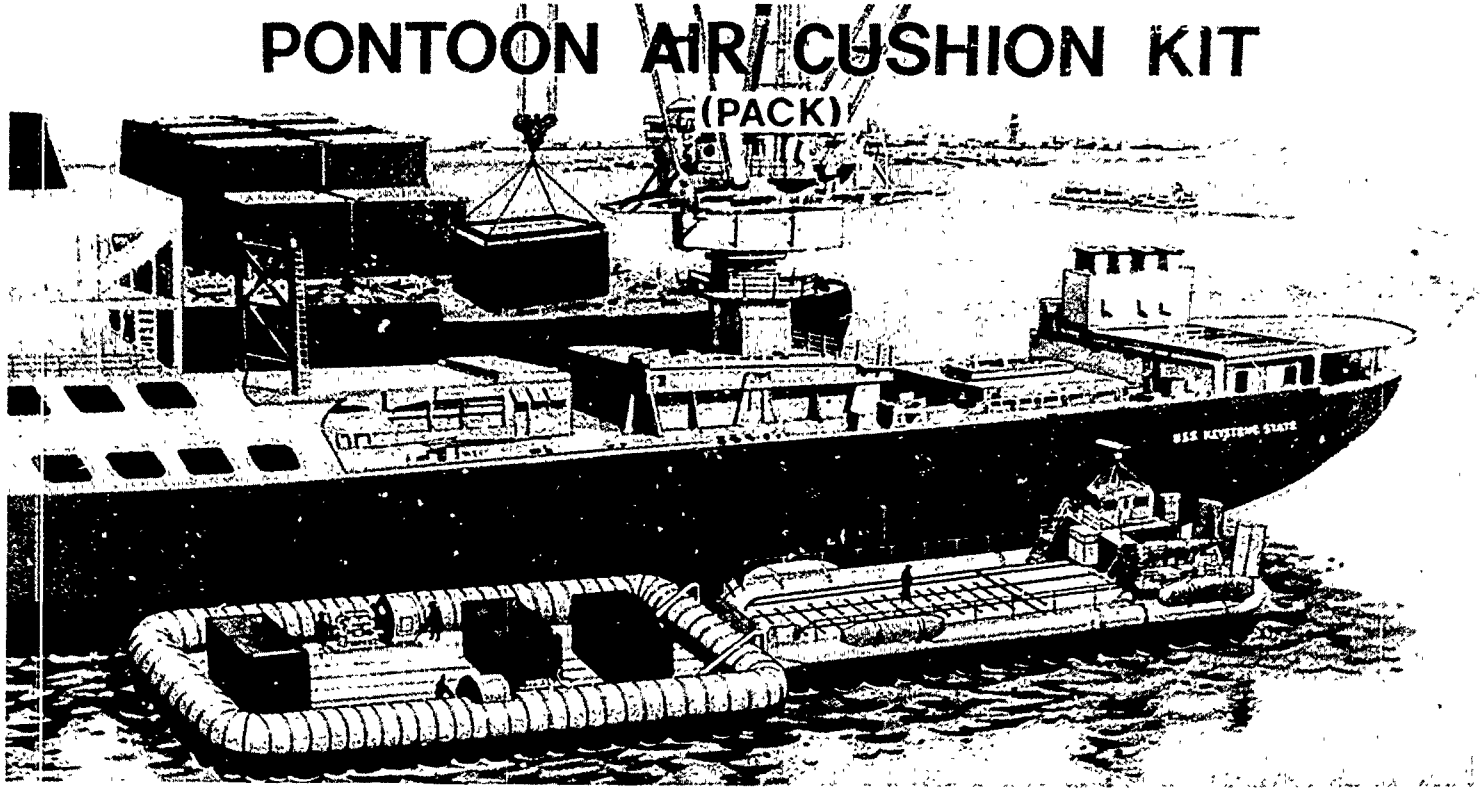
PROGRAM PLAN

Complete PIPs and retrofit all craft in the 331st and 8th Transportation Companies with the improvements. Currently, there is no planned procurement of additional LACV-30s.

NSN

2305-01-061-6230

Pontoon Air Cushion Kit (PACK)



LENGTH: 80 FT (HARD STRUCTURE)
97 FT (INFLATED)

HEIGHT: 4.5 FT (HARD STRUCTURE)

CUSHION HEIGHT: 3 FT

LIGHTSHIP DISPLACEMENT: 154,600 LB

FULL LOAD DISPLACEMENT: 354,600 LB

WEIGHT: 10 STONS (W/O PONTOONS)

BEAM: 24 FT (HARD STRUCTURE)
41 FT (INFLATED)

HEIGHT: 11 FT (INFLATED)

CUSHION AREA: 2,400 SQF

CUSHION PERIPHERAL LENGTH: 225FT

Pontoon Air Cushion Kit (PACK)

POINT OF CONTACT

B. David
US Army Belvoir RD&E Center, STRBE-FMD
Fort Belvoir, VA 22060-5606
Autovon 354-4266/Commercial (703) 664-4266

ITEM DESCRIPTION

The PACK consists of a lightweight peripheral skirt system with an autonomous air supply unit that can be attached in the field to a modular causeway section (80 x 24 foot) converting it into an air cushion supported platform capable of carrying 100 short-tons of cargo.

There are two diesel engine (GM 8V-71) centrifugal fan units which supply pressurized air to the skirt system. The diesel engine/fan units are skid mounted for easy deployment. The skids utilize existing attachment points on the deck of the module pontoons for fastening purposes. The engine/fan units are provided with an integral fuel tank and additional flexible fuel tanks for extended operations.

There are approximately 32 straight rail skirt/rail segments (60 inch wide), 4 straight skirt/rail segments (32 inch wide), 4 corner skirt/rail segments, 8 straight bag segments (20 ft long), and 2 end bag segments that make up the peripheral skirt system.

The PACK is supplied with "pusher knees" that can be attached to one end of the causeway section to facilitate warping operations with US Army lighters. A tow bridle is incorporated into the end skirt/rail segment for towing operations. The PACK is transportable in a 40-foot ISO container.

STATUS

A contract was awarded for the detailed design and fabrication of a full-scale technology demonstrator in February 1989. A Concept Evaluation Program (CEP) user test is scheduled for April 1990. A 1/8th-scale model of the PACK was fabricated and model tested to determine cushion flows, acceptable LCG/TCG, drag under load in various sea state conditions, etc. The model testing was completed 1 October 1989. Full-scale skirt segment testing was completed during February 1990.

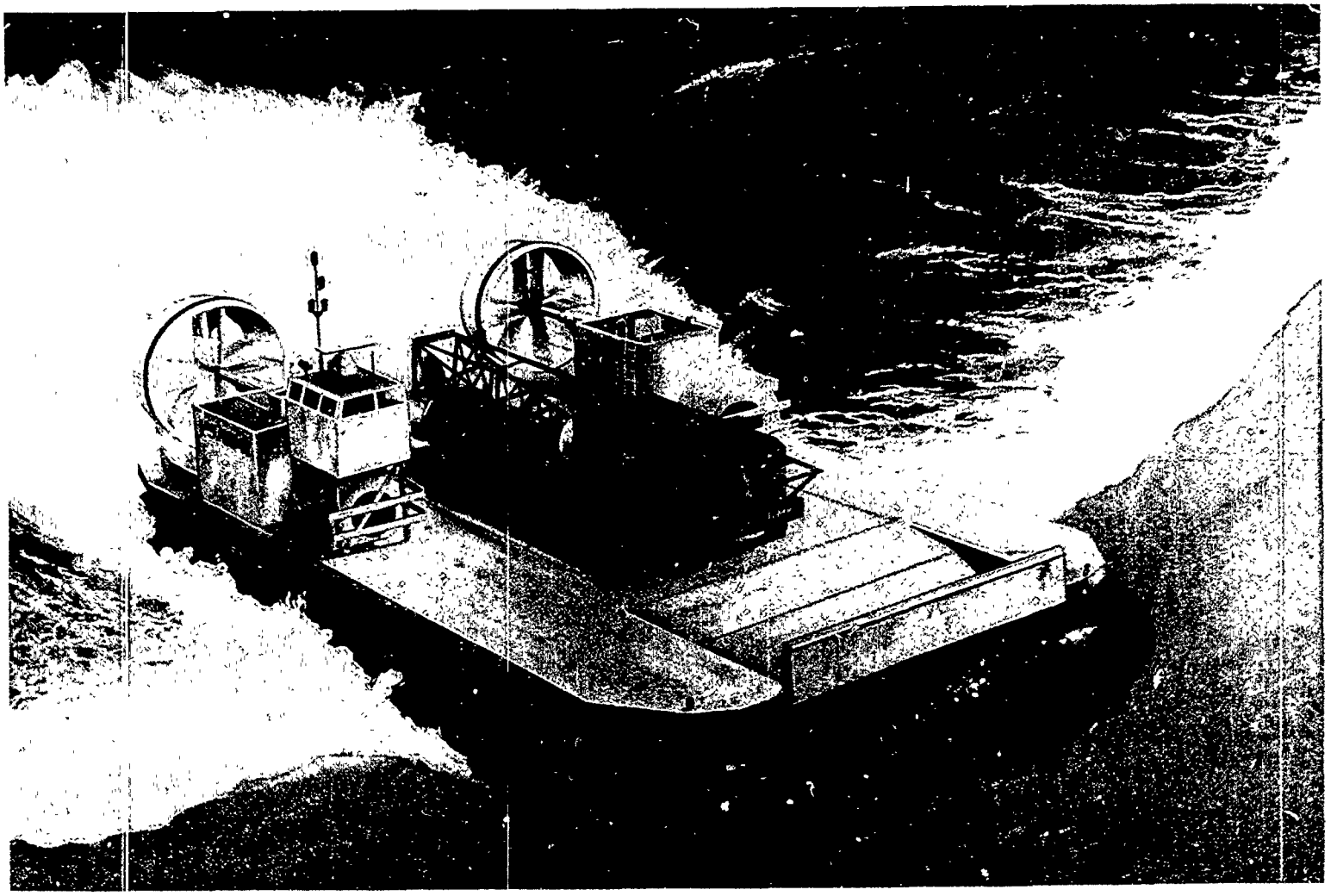
PROGRAM PLAN

The PACK technology demonstrator will undergo CEP tests in FY90. Immediately following, a user In-Process Review will be held to determine if a materiel change program for the Modular Causeway System is desired.

NSN

Not assigned.

Lighter Amphibian, Heavy-Lift (LAMP-H)



Lighter, Amphibian, Heavy-Lift (LAMP-H)

POINT OF CONTACT

R. Schmidt
US Army Belvoir RD&E Center, STRBE-FMD
Fort Belvoir, VA 22060-5606
Autovon 354-4266/Commercial (703) 664-4266

ITEM DESCRIPTION

The LAMP-H is a heavy-lift air cushioned vehicle with amphibious capability, developed to perform in Army Logistics-Over-The-Shore (LOTS) missions. The primary cargo will be vehicles and outsized cargo, with a secondary role of containerized cargo transfer. The craft will be capable of carrying over 100 short tons of cargo, at speeds of 8 to 15 knots. The LAMP-H will have bow and stern ramps and an open cargo deck area, making it capable of roll-on/roll-off and easy crane loading and unloading.

STATUS

A Required Operational Capability (ROC) document was approved in August 1989. Following a successful Milestone I/II In-Process Review (December 1989), the program has transitioned into the Development/Production Prove-Out Phase.

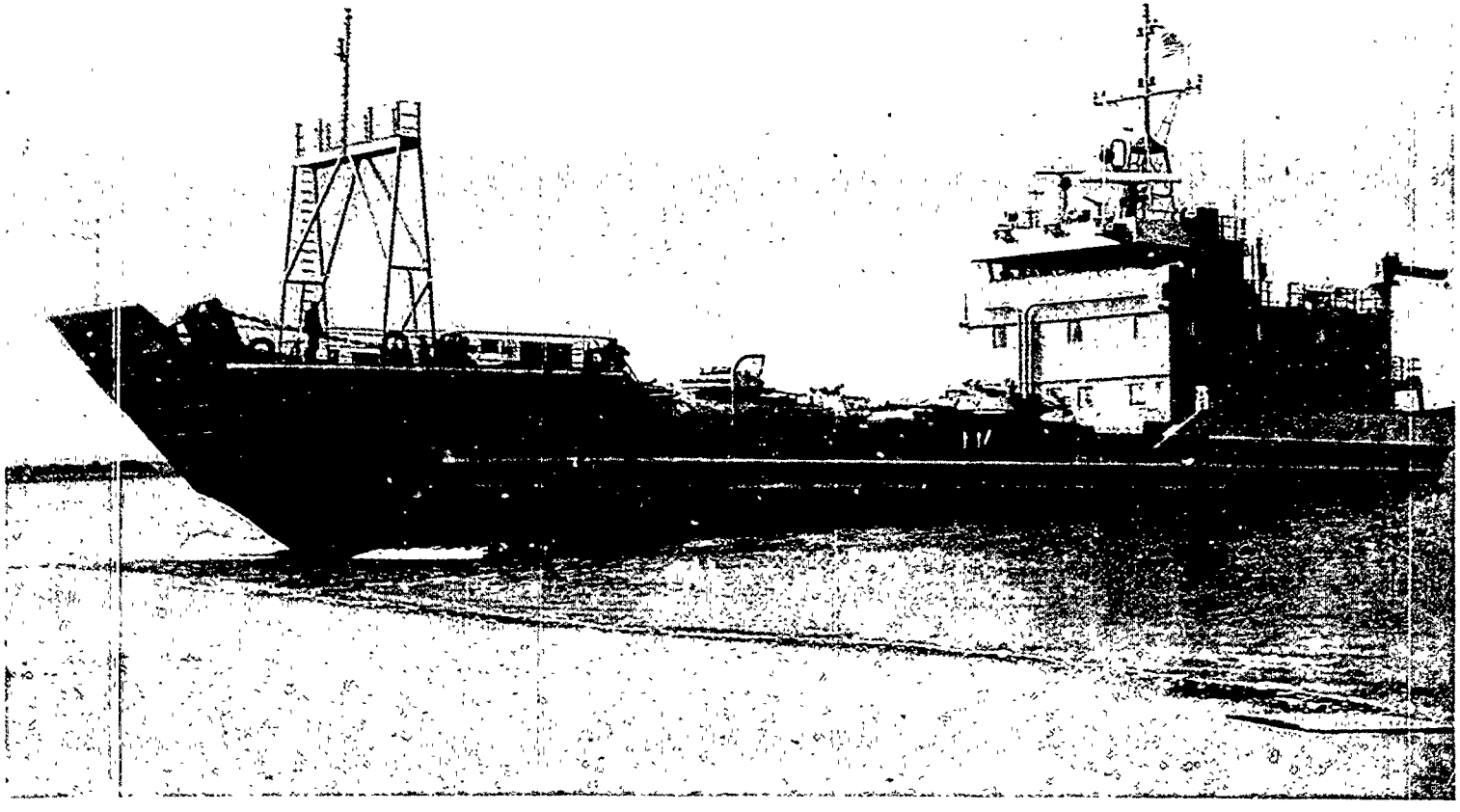
PROGRAM PLAN

Contract award of a Development/Production Prove Out phase prototype is scheduled for 2QFY90. Testing and evaluation will be conducted during FY93 with LAMP-H craft production following. FUE is scheduled for late FY94.

NSN

Not assigned.

Landing Craft, Utility (LCU) 2000



Landing Craft, Utility (LCU) 2000

POINT OF CONTACT

J. Wersching
US Army Belvoir RD&E Center, STRBE-FMS
Fort Belvoir, VA 22060-5606
Autovon 354-5971/Commercial (703) 664-5971

ITEM DESCRIPTION

The LCU 2000 is the latest in the evolution of the landing craft designs, succeeding the 1646 Class LCU and replacing the 1466 Class in the active Army and reserve inventories. The mission of the LCU 2000 is to provide transportation of rolling and tracked vehicles, containers, and outsized and general cargo in support of LOTS operations as well as Coastal, Harbor, and Inland (CHI) waterway missions. The LCU 2000 has an overall length of 174 feet, a beam of 42 feet, and a full load design draft of 8 feet. It is capable of carrying up to 28 20-foot or 12 40-foot ISO freight containers secured on its 2,500 square foot cargo deck, and can carry a full load of 350 short tons. It is configured to deliver 175 short tons through its 16 foot wide bow ramp to shallow 1/30 gradient beaches without exceeding a 4-foot bow draft. The LCU's 2 Cummins V16 turbo-charged diesels with 2,500 installed horsepower will provide a full load speed of 10 knots, and a light delivery speed of 12 knots. The 300 HP Cummins powered Bow Thruster provides added maneuverability during docking or undocking operations. It is classed by the American Bureau of Shipping (ABS) for full ocean service and one-man engine room operations, and is built to US Coast Guard standards. LCUs are equipped with the latest navigation, communication, and electronic equipment including an automatic pilot and steering system. The LCU 2000 will be capable of sustaining its crew of two warrant officers and 11 enlisted personnel for periods of up to 18 days and over 6,000 nautical miles without refueling.

STATUS

The procurement of the LCU 2000 utilizes the Non-Developmental Item (NDI) acquisition strategy, and is managed by the Product Manager for Amphibians and Watercraft (PM-AWC) with specifications prepared by the Belvoir RD&E Center. The LCU 2000 is now in full production and is being constructed by Halter Marine, Inc., a division of Trinity Marine Industries, at the Moss Point Marine Shipyard, Escatawpa, MS, as part of a 5-year multi-year firm fixed price contract awarded in June 1986. The lead vessel, LCU 2001, *US Army Runnymede*, was launched on 14 August 1987 and sea trials were conducted 12-14 July 1988.

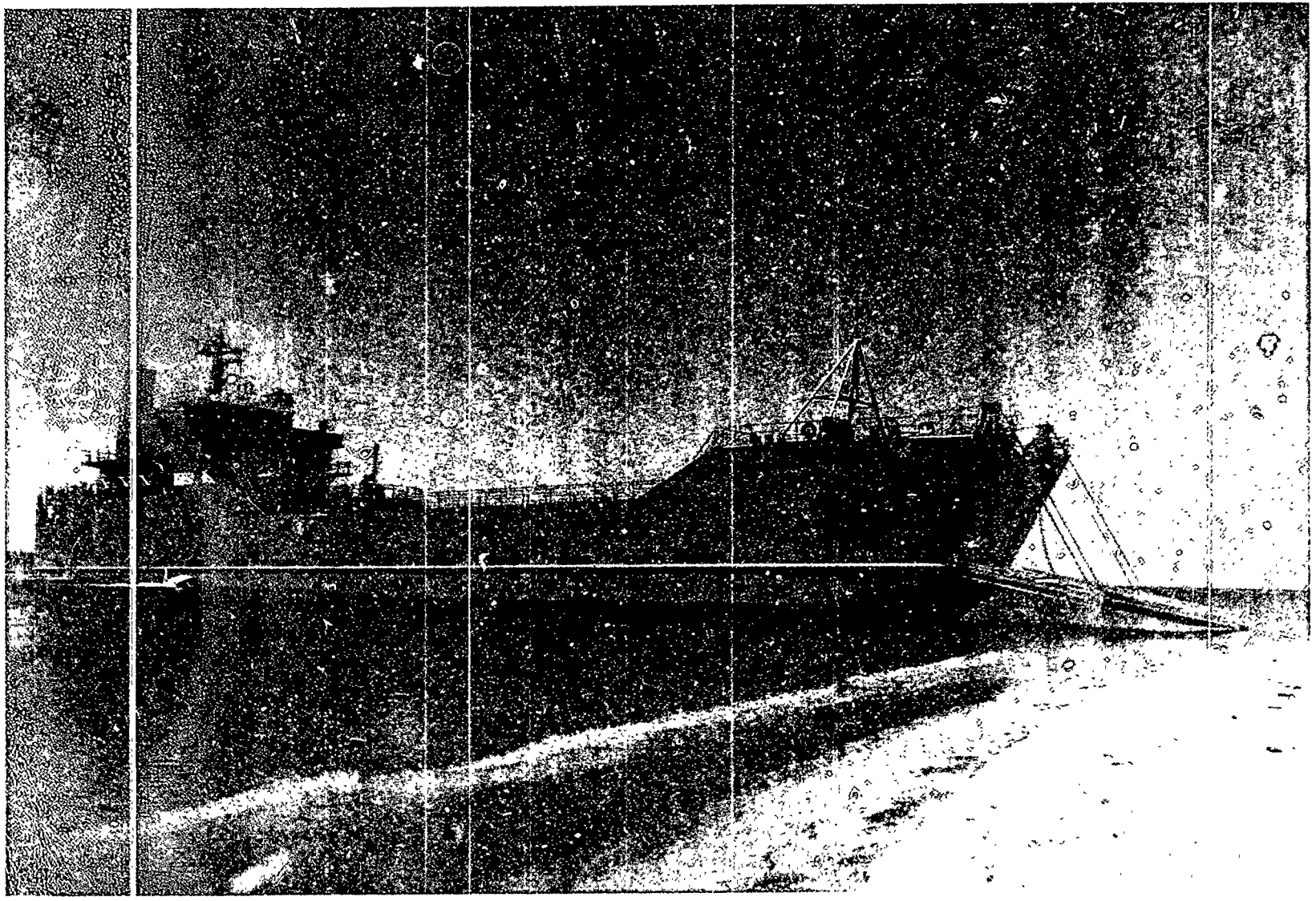
PROGRAM PLAN

The LCU 2000 program plan calls for 25 vessels, with options for 10 additional. LCUs 2001 through 2003 are presently in the process of having eight engineering changes incorporated prior to undergoing final testing for delivery in 2QFY90. LCUs 2004 through 2006 are in final stages of construction and will be tested and also delivered in 2QFY90. LCUs 2007 through 2012 are in various stages of construction and are scheduled for completion during FY90. The last LCU is presently scheduled for delivery in early 1993. Active Army units scheduled to receive the LCU 2000 include the 97th and 329th Transportation Companies, Fort Eustis, VA, the 5th Transportation Company, Fort Shafter, HI, and the National Guard Unit in Rio Vista, CA.

NSN

1905-01-154-1191

Logistics Support Vessel (LSV)



Logistics Support Vessel (LSV)

POINT OF CONTACT

O. Martinovitch
US Army Belvoir RD&E Center, STRBE-FMS
Fort Belvoir, VA 22060-5606
Autovon 354-5319/Commercial (703) 664-5319

ITEM DESCRIPTION

The LSV has the capability of intra-theater linehaul of cargo to support the unit deployment/ relocation, tactical and sustained resupply to remote, undeveloped areas along coastlines and on inland waterways. Additionally, the LSV is capable of self-delivery to a theater of operations. Mission requirements include the capability to assist in discharging and backloading ships in a roll-on/roll-off or LOTS operations with its drive-through capability and of transporting heavy, outsized cargo. The vessel has a self-delivery range of 6,500 nautical miles at service speed of 11.5 knots and is capable of sustaining a crew of 29 for a minimum of 30 days. Utilizing 10,500 square feet of deck cargo space, the LSV can transport 2,000 short tons of cargo consisting of rolling stock, general cargo or containers. Principal characteristics of the LSV are: length (overall), 273 feet; beam (molded), 60 feet; beaching draft, 4-feet at the bow, with 900 tons of cargo distributed uniformly over the deck; twin screw diesel propulsion; 3,900 shaft horsepower; bow thruster; bow and stern ramps; and deck sockets to secure all types of cargo transported.

STATUS

The LSV was type classified Standard, Logistics Control Code (LCC) A in September 1983. After a competitive solicitation, contract for four LSVs was awarded to Moss Point Marine Shipyard, Escatawpa, MS, on 19 September 1986. The LSV was initially fielded in November 1987 and was commissioned as a US Army vessel. The original contract was later modified on 19 September 1989 to include construction of a fifth LSV. Construction of LSV-5 commenced on 27 September 1989 with a contract delivery date of January 1991.

PROGRAM PLAN

The LSV delivery dates are as follows:

Hull No.	Name	Delivery Date	Gaining Command
LSV-1	GEN Frank S. Besson, Jr.	November 1987	FORSCOM
LSV-2	CW3 Harold C. Clinger	February 1988	WESTCOM
LSV-3	GEN Brehon B. Sommervell	April 1988	NGB
LSV-4	LTC William B. Bunker	May 1988	FORSCOM
LSV-5	To be determined	To be determined	To be determined

NSN

1915-01-153-8801

Fast Logistic Ship (T-AKR) Program

Fast Logistic Ship (T-AKR) Program

POINT OF CONTACT

M. Fink
Naval Sea Systems Command, PMS-377K
Washington, DC 20362-5101
Autovon 332-4834/Commercial (703) 602-4834

ITEM DESCRIPTION

The Fast Logistic Ship (T-AKR) Program includes the procurement of eight SL-7 class high-speed containerships and their subsequent conversion to a cargo configuration specifically designed for rapid load/unload of military vehicles and equipment, including tanks and helicopters. T-AKR ships will enhance the ability to quickly deploy military equipment and supplies from the continental United States to potential objective areas throughout the world. The conversion design includes installation of decks midship to permit roll-on/roll-off of vehicles, addition of a flight deck for helicopter operations, and retention of the existing container cells aft. The T-AKR provides the capability to transport 78 special-purpose heavy-duty flatracks in the aft part of the ship: 53 (35 feet long x 8 feet wide x 13.5 feet high), 22 (35 feet long x 8 feet wide x 10.5 feet high), 3 (35 feet long x 8 feet wide x 8.5 feet high), 46 containers (20 feet long x 8 feet wide x 8 feet high)*, and 8 SEASHEDs (35 feet long x 25 feet wide x 12.5 feet high). The 35-foot special-purpose flatracks were designed specifically for use on-board the T-AKR and are capable of carrying a maximum cargo weight of 134,400 pounds. These flatracks have been designed with hinged edge flaps installed along one side to provide the ability to span the gaps between flatracks in container cells resulting basically in a series of *'tween decks.*

STATUS

Contracts for conversion of four SL-7 ships were awarded in September 1982 to three shipyards with options for four additional ship conversions: Avondale Shipyards, Inc. (ASI) (one firm, two options); National Steel and Shipbuilding Company (two firm, one option); and Pennsylvania Shipbuilding Company (one firm, one option). The options for conversion of the remaining four ships were exercised on 31 October 1983. The eight ships have been redelivered as follows: USNS ALGOL (T-AKR 287) 6/84; USNS CAPELLA (T-AKR 293) 6/84; USNS ALTAIR (T-AKR 294) 7/84; USNS BELLATRIX (T-AKR 288) 9/84; USNS REGULUS (T-AKR 292) 8/85; USNS DENEBOLA (T-AKR 289) 10/85; USNS ALTAIR (T-AKR 291) 11/85; and USNS POLLUX (T-AKR 290) 3/86. Deliveries of SEASHEDs and flatracks to the eight T-AKR ships were completed in September 1984. Each T-AKR is also equipped with two 35-foot spreaders, two 20-foot spreaders, and one 40-foot spreader to enhance load/offload operations.

PROGRAM PLAN

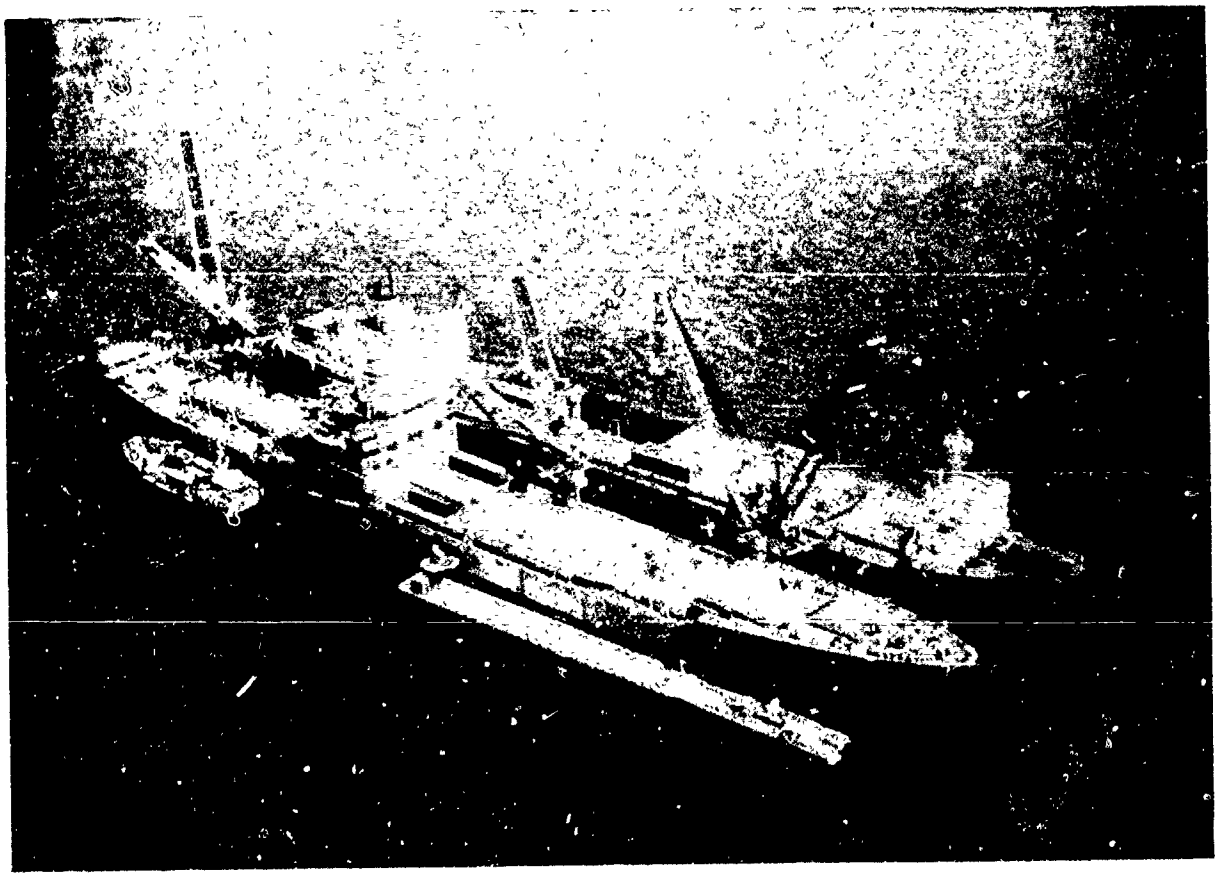
Program completed. The Fast Logistic Ships are under operational control of the Military Sealift Command.

NSN

Not assigned.

* 44 containers (20 feet long x 8 feet wide x 8 feet high) on USNS ALGOL (T-AKR 287), USNS BELLATRIX (T-AKR 288) and USNS REGULUS (T-AKR 292).

Auxiliary Crane Ship (T-ACS)



Auxiliary Crane Ship (T-ACS)

POINT OF CONTACT

M. Baig
Naval Sea Systems Command, PMS-377V
Washington, DC 20362-5101
Autovon 332-7881/Commercial (703) 602-7881

ITEM DESCRIPTION

The T-ACS is a converted containership from the MARAD Reserve Force modified by the installation of twin-boom marine cranes. Auxiliary features supporting crane operation include upgraded or supplementary living quarters, upgraded messing facilities, upgraded communications suites, additional generator capacity, semi-permanent or permanent ballast, modification of some container cells to permit installation of SEASHEDs, lighterage stowage capability, and upgraded mooring and fendering capabilities.

The primary mission of the ship is to offload non-self-sustaining cargo (container) ships moored alongside with offload operations conducted at anchor, in the stream, or in an underdeveloped or damaged port. The ship also has the capability to discharge its own cargo.

The cranes on the T-ACS are evolutionary variations of the level luffing type crane already in widespread merchant service. All T-ACS classes have twin boom rotating pedestal cranes. The T-ACS 1 has three twin cranes capable of offloading 30 long tons with a single boom, 60 long tons with twin booms, and 105 long tons in tandem (four booms). The T-ACS 4 has two twin cranes capable of offloading 30 long tons with a single boom, 60 long tons with twin booms, and 120 long tons in tandem. T-ACS 7 through T-ASC 10 will have the same crane design and capability as the T-ACS 4 except T-ACS 7 and T-ACS 8 have three twin cranes.

STATUS

T-ACS 1, SS KEYSTONE STATE, began conversion in March 1983 by Bay Shipbuilding Corporation, and was delivered in May 1984. The ship successfully completed J-LOTS II exercises in October 1984. The second ship, T-ACS 2, SS GEM STATE, began conversion in September 1984 at Continental Maritime of San Francisco, Inc., and was delivered in October 1985. Dillingham Ship Repair began conversion of T-ACS 3, SS GRAND CANYON STATE, in September 1985 and delivered the ship in October 1986. The conversion contract for T-ACS 4, SS GOPHER STATE, T-ACS 5, SS FLICKERTAIL STATE, and T-ACS 6, SS CORNHUSKER STATE, was awarded to Norfolk Shipbuilding and Drydock Corporation, in August 1986. Redeliveries of T-ACS 4, 5, and 6 were October 1987, February 1988, and April 1988, respectively. The conversion contract for T-ACS 7, SS DIAMOND STATE, and T-ACS 8, SS EQUALITY STATE, was awarded to Tampa Shipyards, Inc., in September 1987. T-ACS 7 and T-ACS 8 were redelivered in February 1989 and May 1989, respectively. The conversion contract for T-ACS 9, SS GREEN MOUNTAIN STATE, and T-ACS 10, SS BEAVER STATE, was awarded to Norfolk Shipbuilding and Drydock Corporation in January 1989. Scheduled contract redelivery of T-ACS 9 is April 1990 and T-ACS 10 redelivery will be determined at a later date.

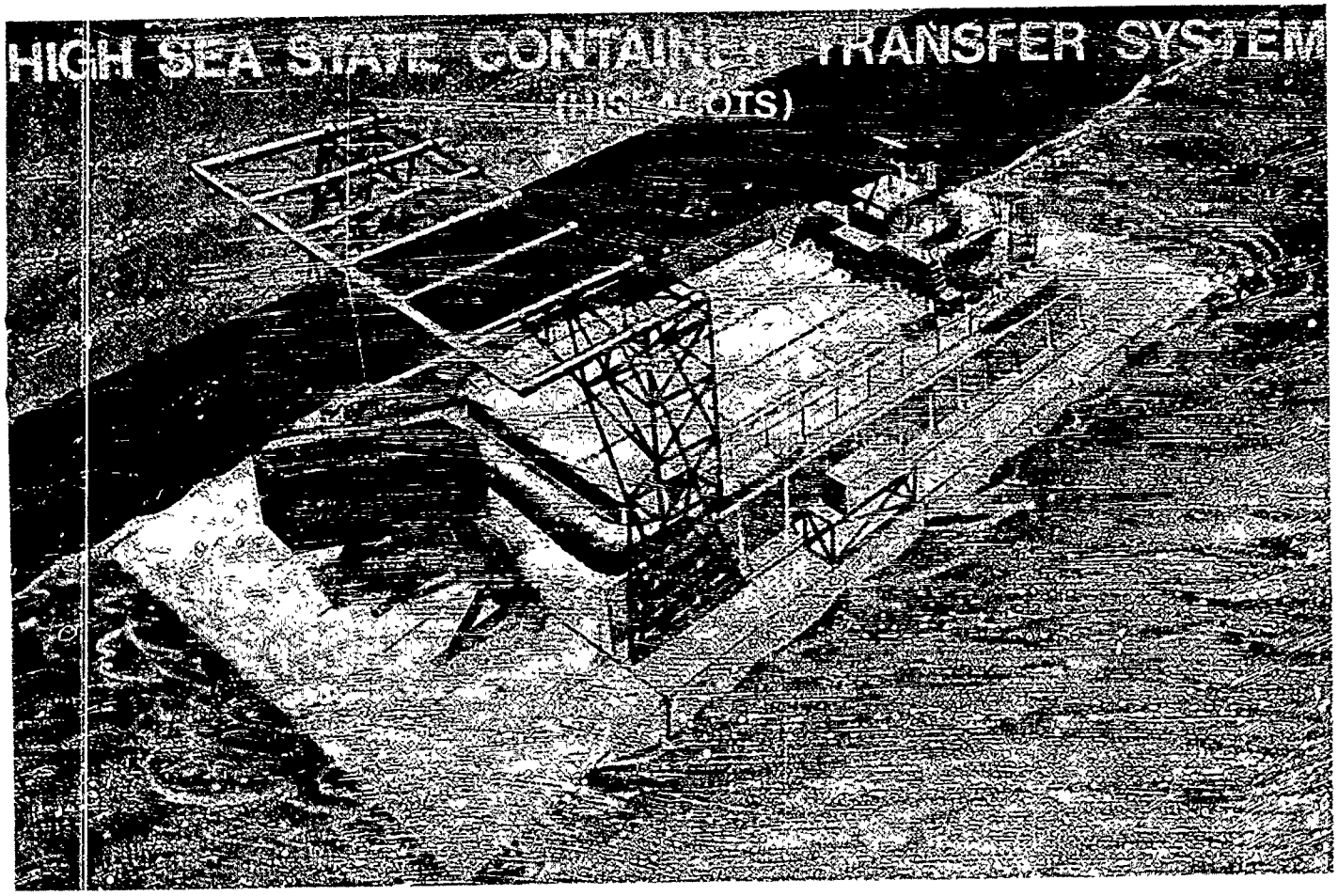
PROGRAM PLAN

The T-ACS program calls for conversion of a total of 12 ships from the MARAD Reserve Force. As directed by Congress, the Navy did not budget for T-ACS 11 and 12 in the FY90 or future budgets. MARAD is to plan for the T-ACS 11 and 12 conversions as part of the Department of Transportation (DOT) budget request.

NSN

Not assigned.

High Sea State Container Transfer System (HISEACOTS)



LENGTH: 120 FT
GANTRY HEIGHT: 32 FT
WIDTH: 56 FT
WEIGHT: 250 STON
(MODULES W/GANTRY)

High Sea State Container Transfer System (HISEACOTS)

POINT OF CONTACT

B. David
US Army Belvoir RD&E Center, STRBE-FMD
Fort Belvoir, VA 22060-5606
Autovon 354-4266/Commercial (703) 664-4266

ITEM DESCRIPTION

The HISEACOTS is a system that has been developed to stabilize the offloading/lighter interface in high sea states (SS 3/4). The system consists of a floating platform made up of modular ISO pontoons (120 x 56 foot), with fore and aft floodable ramps, and batterboards to guide air cushion vehicles (i.e., US Army LACV-30) onto the platform. This platform is fitted with a specially designed gantry crane that is used to offload containers/vehicles. The gantry crane has a pendulation attenuator bar that mitigates all pendulation motions through friction forces generated at the bar by the container slings. A positive lock/spar device further reduces any heave motions present and allows the offload of eccentrically loaded containers. The HISEACOTS is designed to offload ISO containers and cargo weighing up to 50,000 pounds in Sea State 4.

STATUS

The HISEACOTS is currently in the concept exploration phase. A Small Business Innovation Research (SBIR) Program contract was awarded (Phase I) in 1986 for concept design. A Phase II SBIR contract was awarded in 1988 for a detailed HISEACOTS system design and additional fabrication and testing of the special gantry crane. Land based testing of the Gantry Crane is scheduled for 2QFY90. A joint Army/Navy technology demonstration of an air cushion "fly-on/fly-off" platform is scheduled for 4QFY90.

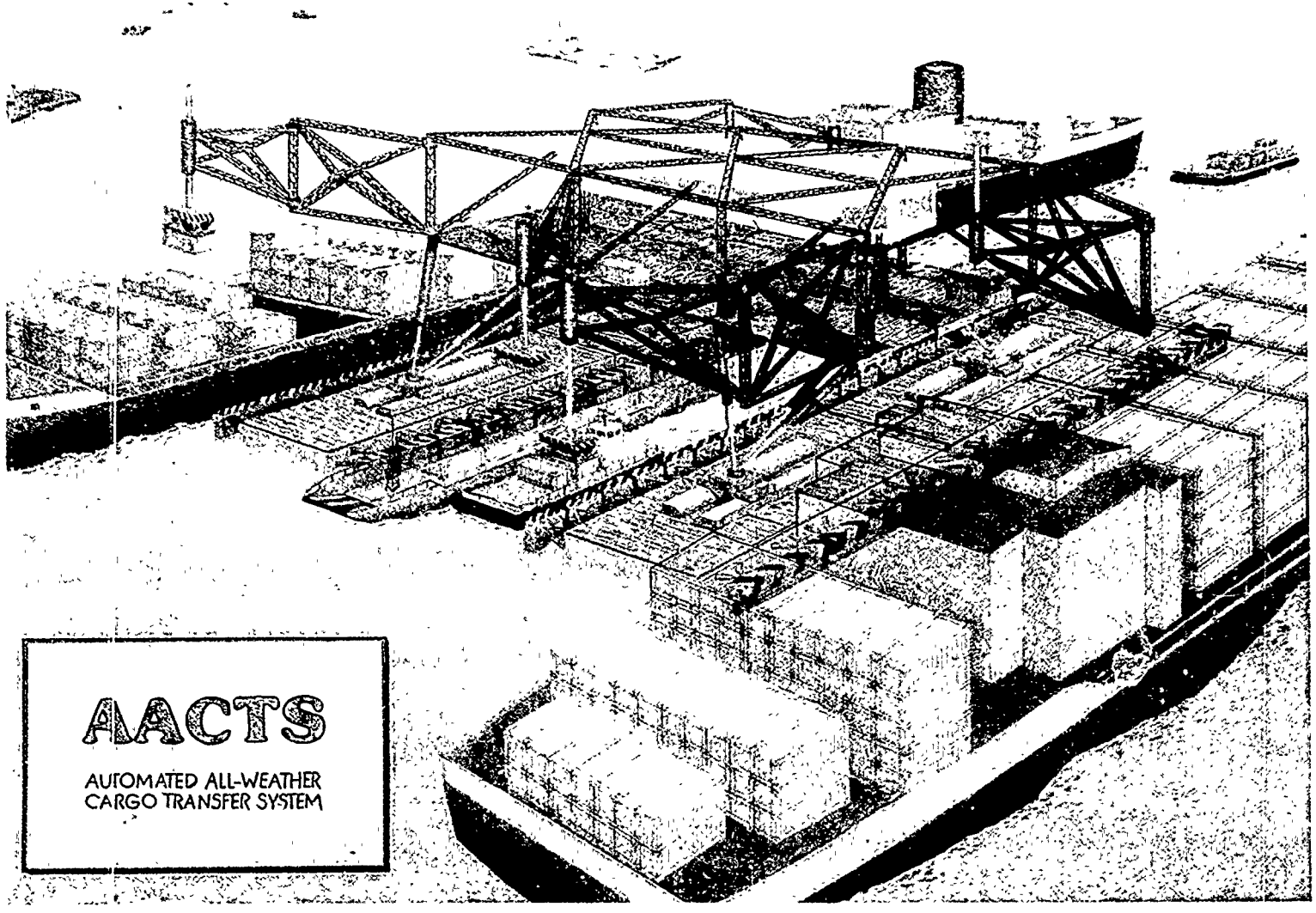
PROGRAM PLAN

Transition into a Development - Production Prove-Out Phase in FY91.

NSN

Not assigned.

Automated All-Weather Cargo Transfer System (AACTS)



Automated All-Weather Cargo Transfer System (AACTS)

POINT OF CONTACT

W. Brower
US Army Belvoir RD&E Center, STRBE-FMR
Fort Belvoir, VA 22060-5606
Autovon 354-1143/Commercial (703) 664-1143

ITEM DESCRIPTION

The AACTS is a large robotic system which will be used to offload and upload ISO cargo containers between containerships and lighterage in stream in support of Logistics-Over-The-Shore (LOTS) operations. The complete system consists of the following five major components: 1) Intelligent Spreader Bar; 2) Manipulator Arm; 3) Superstructure/Motion Compensation; 4) Command Module; and 5) Berthing Modules. The system will have the ability to identify and engage an ISO container in a ship's hold or on deck and transfer it to landing craft in sea states up to and including Sea State 4. The AACTS will resolve a major deficiency in LOTS operations by increasing the number of containers transfered from ship-to-shore during Sea States 2 and 3 and will also reduce personnel requirements.

Rather than using AACTS in stream, one arm from the system could be fixed to the end of a pier or causeway and used to transfer containers from the lighterage to trailers for transport on land.

STATUS

The AACTS was established under the Small Business Innovative Research (SBIR) Program. August Design and Development submitted the SBIR and has been performing the effort under the SBIR Program. Phase I consisted of a feasibility study and the effort was completed during FY87. The program is currently in Phase II which was initiated during FY88 and consists of producing a working 1/10th scale model of the Intelligent Spreader Bar, Manipulator Arm, Berthing Module, and Motion Platform to prove the concept of handling containers autonomously form a moving platform.

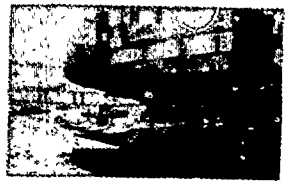
PROGRAM PLAN

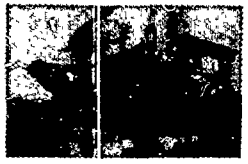
Phase II of the SBIR is scheduled to be completed during 4QFY90. Possible model basin testing of the 1/10th model is planned for the future depending on funding.

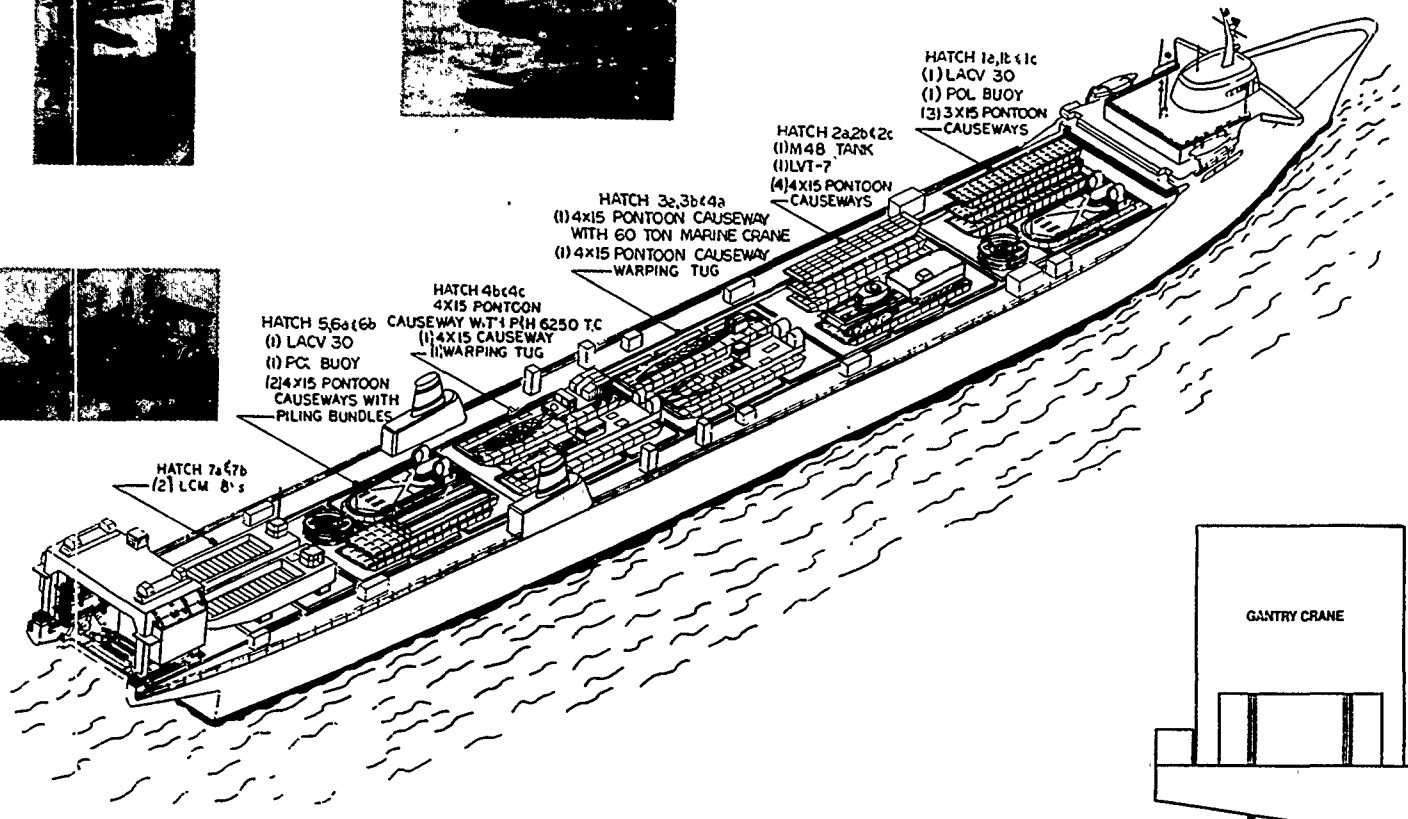
NSN

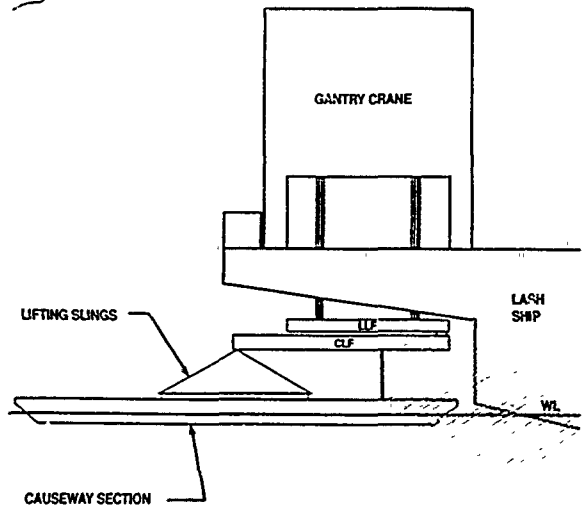
Not assigned.

Cantilevered Lift Frame (CLF)









TYPICAL DECK STOWAGE FOR OUTSIDE CARGO COMPONENTS FOR G9 LASH VESSEL

LASH/CAUSEWAY LIFTING OPERATIONS

Cantilevered Lift Frame (CLF)

POINTS OF CONTACT

G. Walker
Naval Facilities Engineer Command, FAC-032B
Alexandria, VA 22332
Autovon 221-8535/Commercial (703) 325-8535

T. Vaughters
David Taylor Research Center, DTRC-125
Annapolis, MD 21402-5067
Autovon 281-2261/Commercial (301) 267-2261

ITEM DESCRIPTION

The CLF has the capability to deploy commercial LASH vessels with heavy, outsized equipment and to off-load offshore. This special lifting device attaches to the LASH ship's gantry crane (designed to lift 30- x 60-foot barges up to 500 short tons) and enables the lift of non-barges, eccentric loads up to 150 tons approximately 60 feet wide x 90 feet long. The frame was designed to be mated to the four lifting sockets of either the Morgan or Alliance lighter crane lifting frames. The design concept, called the *Cantilevered Lift Frame*, has been accepted as a National Defense feature by MARAD. Certification by the American Bureau of Shipping is based on the capacity of the eccentric loaded crane.

STATUS

Development is underway to provide quick-release devices for the rigging gear to assist Sea State 3 offload of causeways from a LASH ship. Existing design is under procurement for a total of 14 units. Delivery began in FY81. The quick release device was tested during LOGEX 88 on a TACS ship.

PROGRAM PLAN

Complete procurement of 14 units. Change rigging design if development is successful and continue procurement of device with lift beam, when available.

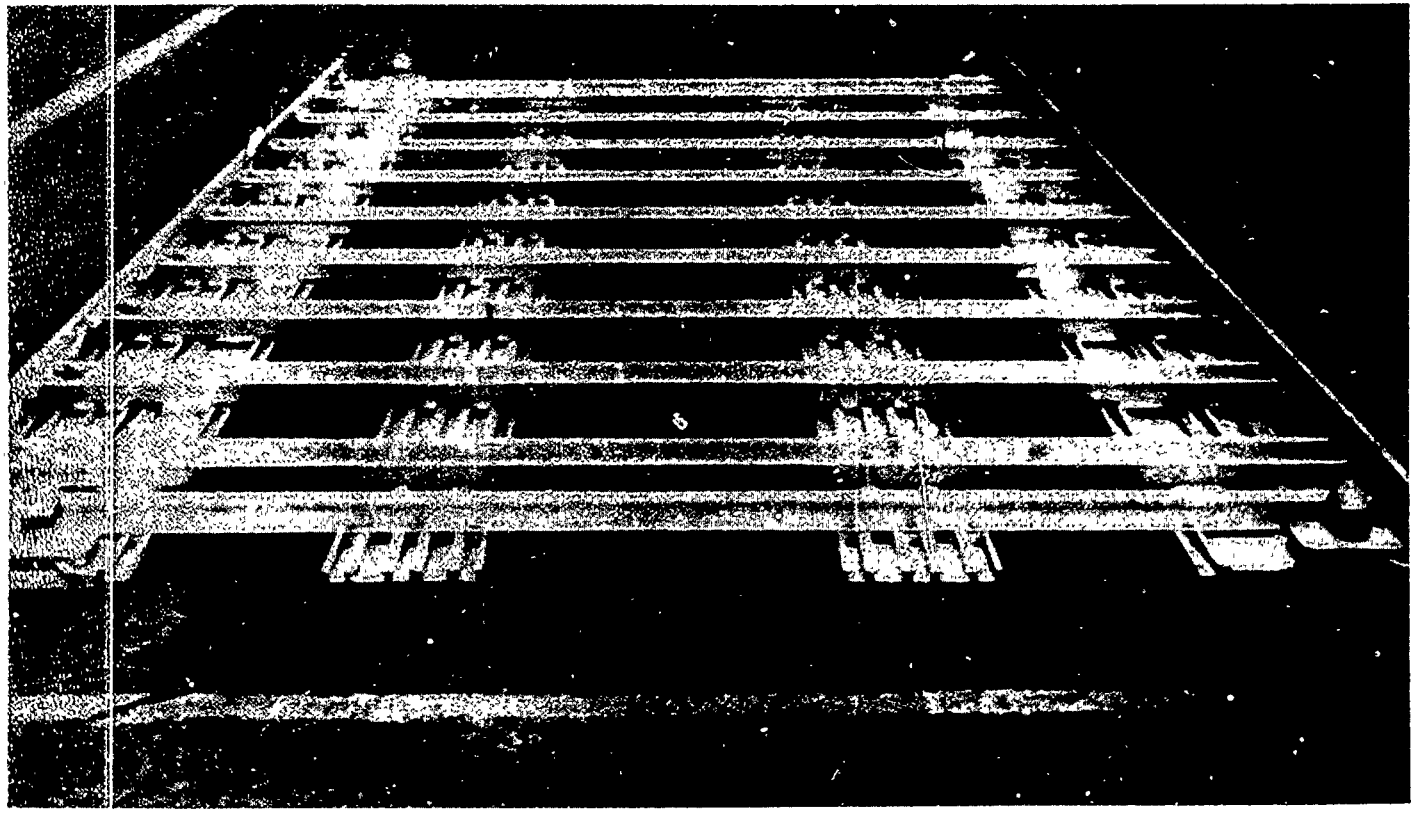
NSN

3950-LL-LCA-0115

PART V

AERIAL PORT/ TERMINAL EQUIPMENT

463L/ISO Adapter System



463L/ISO Adapter System

POINT OF CONTACT

COL L. Drum
Warner Robins Air Logistics Center, WRALC/MMVV
Robins AFB, GA 31098-5609
Autovon 468-2062/Commercial (912) 926-2062

ITEM DESCRIPTION

The adapter tactical shelter system provides a means for handling ISO air/surface containers and, to a limited extent, surface containers in the 463L aircraft material handling system. The system adapts the ISO 96-inch width to the 463L 108-inch width and provides an interface with the aircraft roller system.

STATUS

The Air Force has tested and evaluated several different adapter systems to date:

- Two prototype open-grid adapter pallets were procured and successfully tested under the MODCOM Program in 1974. A buy program for this pallet was deferred in favor of a flat platform.
- Brooks and Perkins, Inc., designed a system using A/E 29H1 airdrop platforms (single-managed by US Army) using Brooks and Perkins side rails and end plates with installed ISO corner fittings. AFSC/ESD evaluated this alternative, though stress tests conducted by US Army Natick Labs, Natick, MA, determined that airdrop platforms do not provide adequate features to accommodate movement of containers. Therefore, this initiative was terminated.
- The Military Airlift Command submitted a Statement of Operational Need (SON) for an adapter system which was approved by the Air Force in February 1983. Later the SON was withdrawn.
- Two companies developed a solid platform adapter pallet capable of handling air/land, SEAVAN, and tactical shelters.
- The Air Force Electronic Systems Division, Hanscom Field, MA, designed a system using two detachable rails to satisfy the requirement. During FY88, three prototype systems were built and tested.

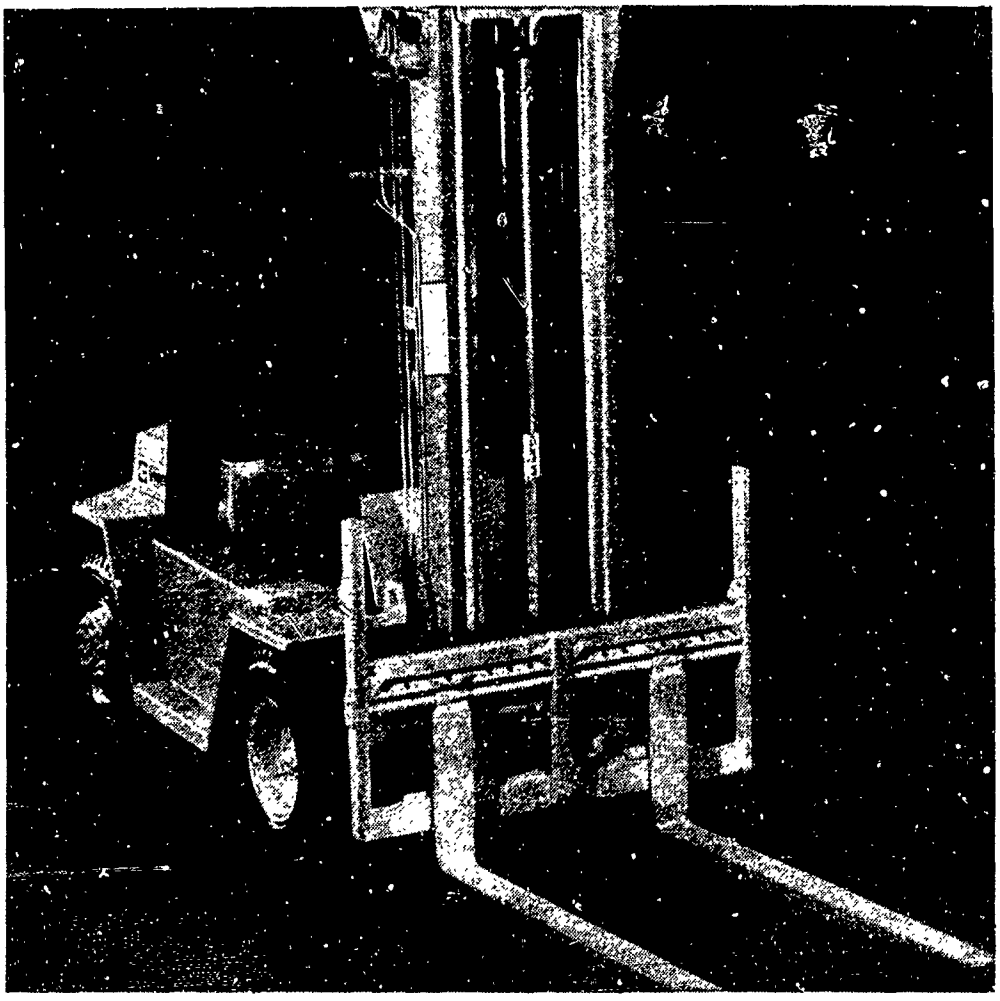
PROGRAM PLAN

The requirements for this program are not firm at this point and no procurements are currently scheduled.

NSN

Not assigned.

Avionics Intermediate Shop (AIS) Shelter Movement



Avionics Intermediate Shop (AIS) Shelter Movement

POINT OF CONTACT

CAPT J. Wray
HQ TAC/LGTV
Langley AFB, VA 23665-5541
Autovon 574-5685/Commercial (804) 764-5685

ITEM DESCRIPTION

This is a new requirement for the Avionics Intermediate Shop (AIS) Shelter Movement within TAC. This vehicle has a lifting capacity of 22,100 pounds at a 48-inch load center, utilized to handle tactical shelters. This forklift is a commercially available vehicle and not air transportable. Rough terrain capability is not required. Side shift carriage is mandatory.

STATUS

A contract for 58 units has been awarded to Clark Material System Technology Company. Nineteen of the 58 units are allocated to TAC. First Article Testing was conducted during March 1989. First production is to begin 15 February 1990 with final production anticipated during June 1990. Estimated cost is $80,000 each. Contractor has predicted a monthly production of 15 units.

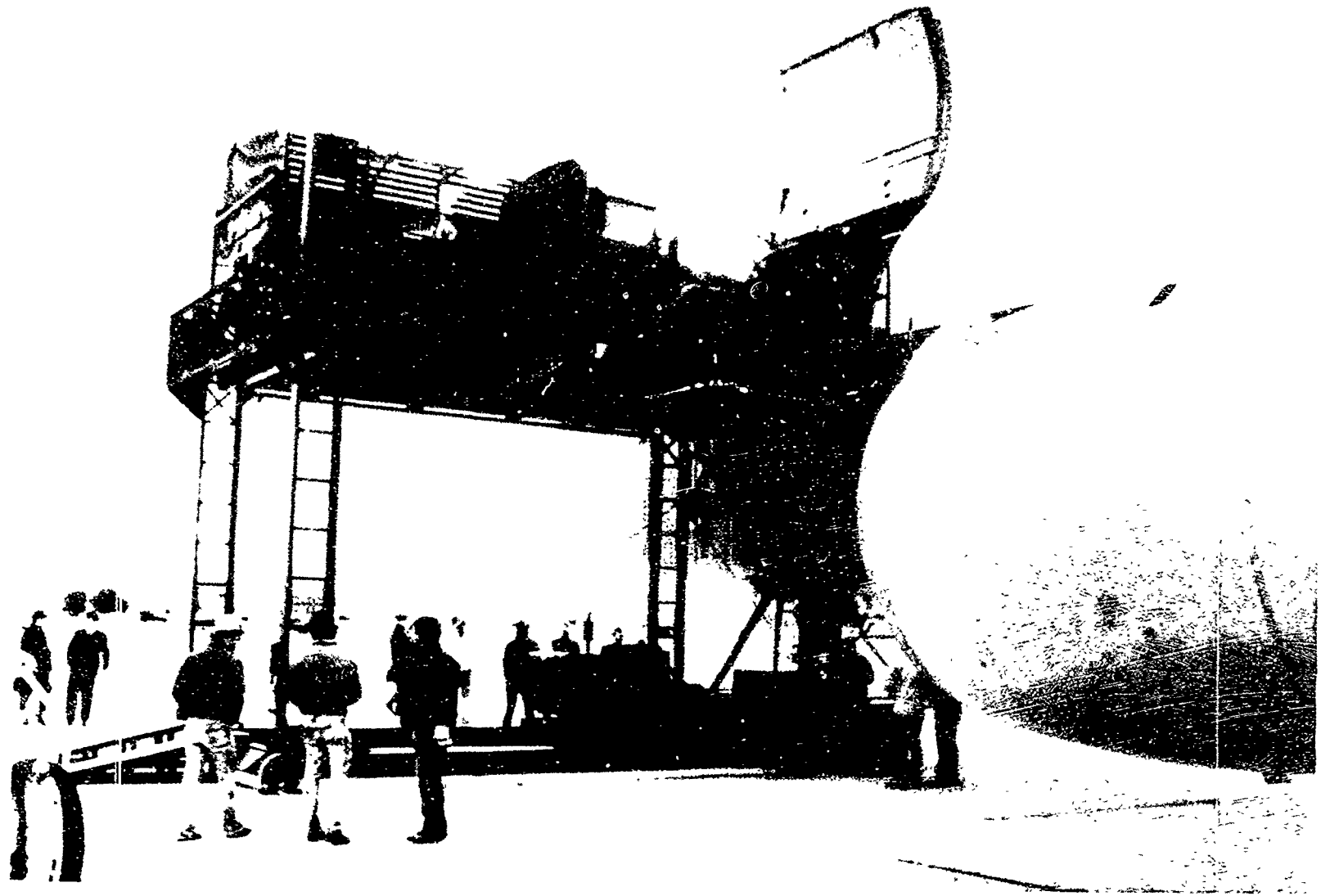
PROGRAM PLAN

TAC will fill all container loading authorizations with the 22,000 pound forklifts.

NSN

3930-01-220-3657

Elevator Loader



Elevator Loader

POINT OF CONTACT

COL L. Drum
Warner Robins Air Logistics Center, WRALC/MMVV
Robins AFB, GA 31098-5609
Autovon 468-2062/Commercial (912) 926-2062

ITEM DESCRIPTION

This item is air transportable on a C-130 aircraft. There are three models of elevator loaders currently in the Air Force inventory. The Cochran Model 316A has a two-pallet, 25,000-pound capability. The Cochran Model 316E and the Wilson have a three-pallet, or one air/land container, 40,000-pound capability. The Elevator Loader can also be used to load/unload rolling stock up to its capacity. It is compatible with wide-body aircraft upper deck nose doors and side doors, with maximum transfer height of 18-feet, 6 inches. It is used at major aerial ports for efficient mechanized loading/offloading of cargo between wide-body aircraft and other materials handling equipment.

STATUS

The Air Force has 101 elevator loaders on hand. 59 CL3 elevator loaders were recently refurbished.

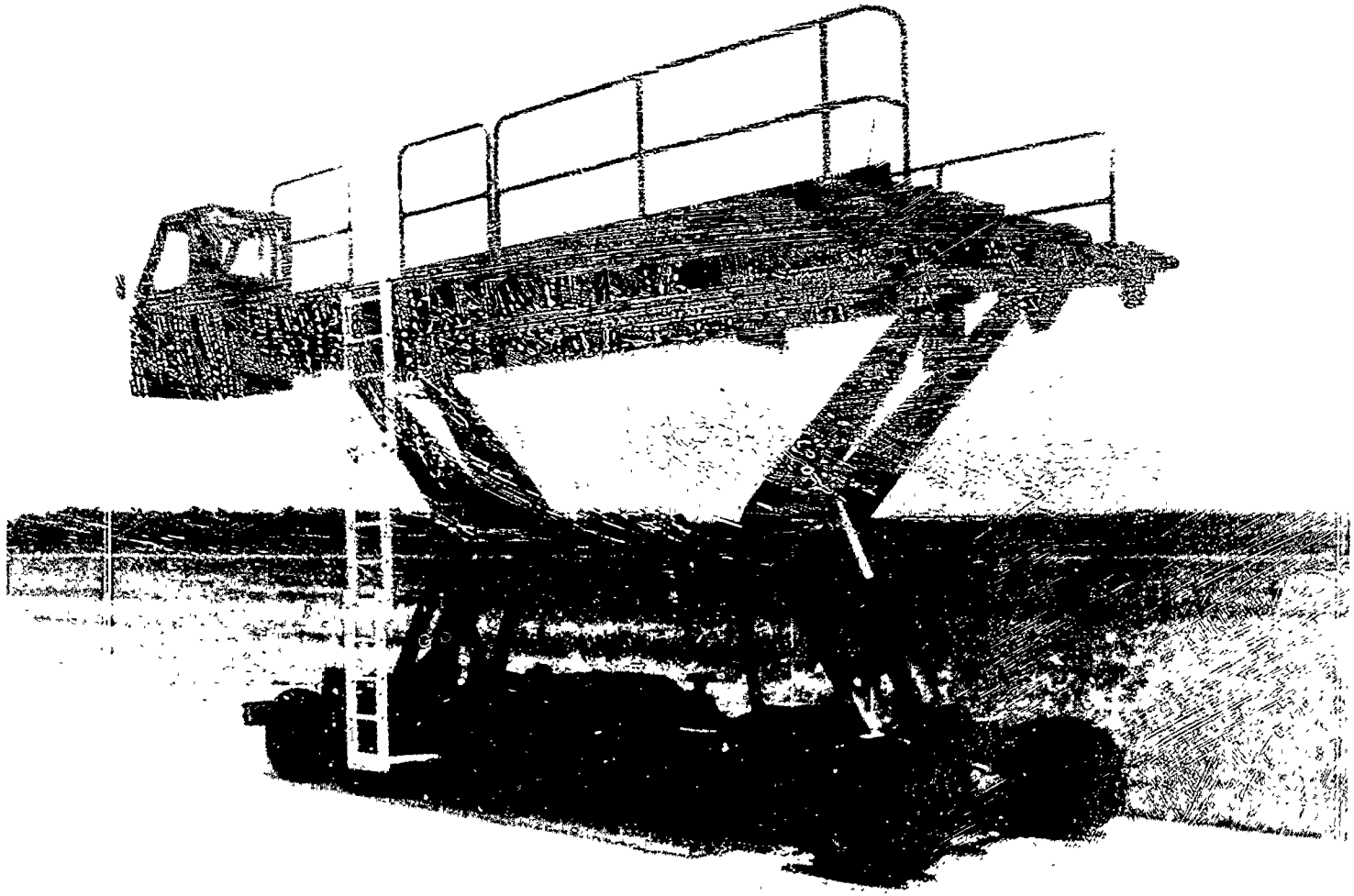
PROGRAM PLAN

The remaining 42 elevator loaders will undergo a refurbishment program beginning in 2QFY90. The elevator loaders will eventually be replaced by the 60,000-pound Capacity Loader which is scheduled for procurement in 2QFY94.

NSN

3930-01-069-1026 CT

25,000-Pound 463L Aircraft Loader



25,000-Pound 463L Aircraft Loader

POINT OF CONTACT

COL L. Drum
Warner Robins Air Logistics Center, WRALC/MMVV
Robins AFB, GA 31098-5609
Autovon 468-2062/Commercial (912) 926-2062

ITEM DESCRIPTION

This diesel-powered loader has the capacity to transport 25,000-pound palletized aircraft loads to and from cargo aircraft. It has a platform length of 24 feet, a width of 10 feet, and can accommodate three 463L pallets. The 25,000-pound loader is air transportable by C-130 aircraft and available at major aerial ports. The 25,000-pound loader can accommodate ISO containers with gross weight, including 463L adapter systems, of 25,000 pounds.

STATUS

The Air Force currently has 485 units on hand. A contract was awarded 1 July 1987 for 189 additional 25,000-pound aircraft loaders, with a start delivery date of 1QFY91.

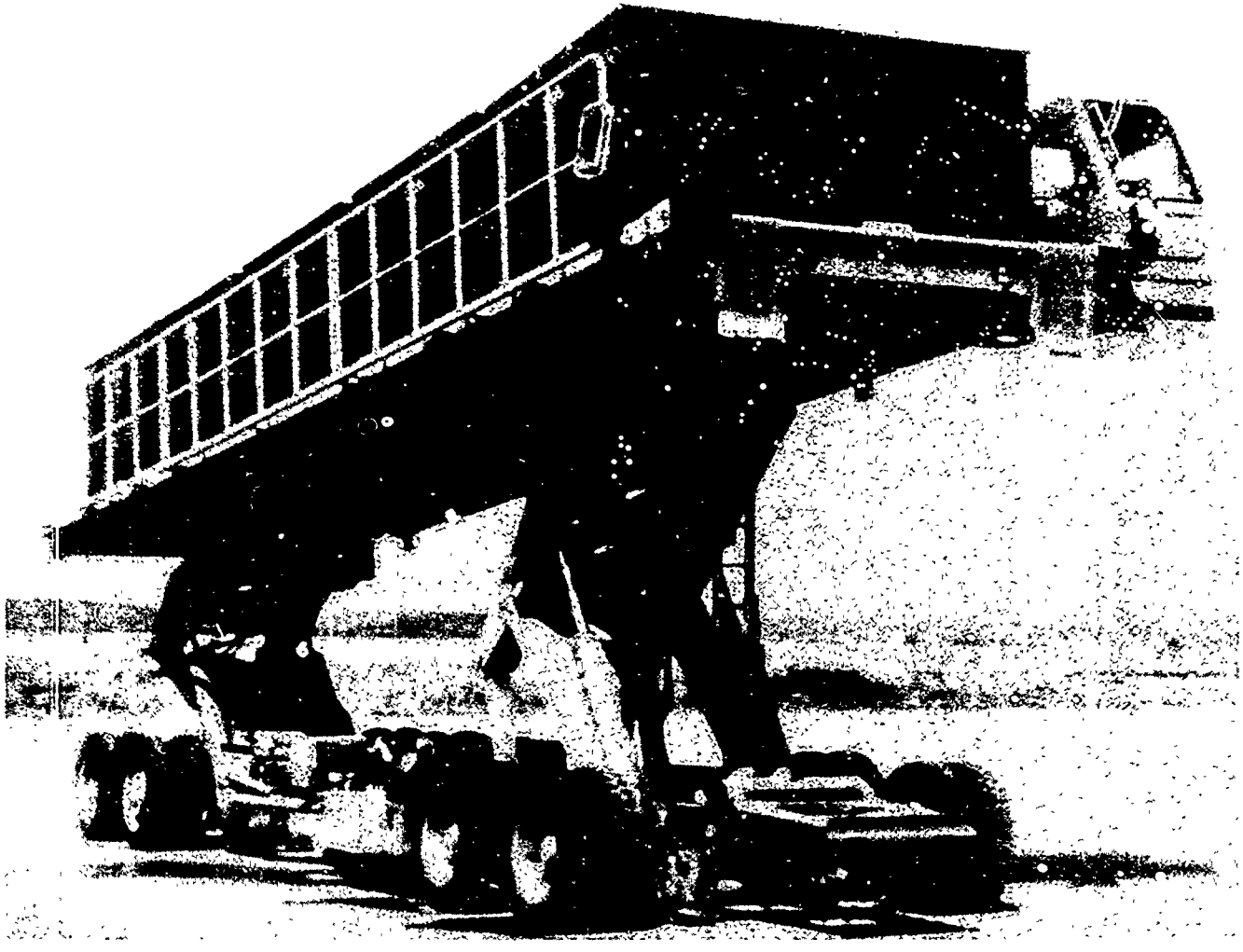
PROGRAM PLAN

The inventory objective is 783 units.

NSN

3930-00-955-3293 CT

40,000-Pound 463L Aircraft Loader



40,000-Pound 463L Aircraft Loader

POINT OF CONTACT

COL L. Drum
Warner Robins Air Logistics Center, WRALC/MMVV
Robins AFB, GA 31098-5609
Autovon 468-2062/Commercial (912) 926-2062

ITEM DESCRIPTION

This aircraft loader has the capacity to transport 40,000-pound palletized loads to and from cargo aircraft. It has a platform length of 41 1/2 feet, a width of 10 feet, and a lifting range of 3 1/3 to 13 feet at 10 FPM. The unit will accommodate five 463L pallets. The loaders are air transportable and are available at all major aerial ports. The 40,000-pound loader can also accommodate an ISO container loaded on married 463L pallets or other adapter systems.

STATUS

The Air Force has 286 40,000-pound loaders on hand.

PROGRAM PLAN

The 40,000-pound loader will be replaced by the 60,000-pound Capacity Loader which is scheduled for procurement in 2QFY94. The 60,000-pound Capacity Loader will be air transportable, a member of the 463L Materiel Handling System, and capable of loading all aircraft including the C-17. A depot overhaul contract is currently in place to assure operational readiness.

NSN

3930-00-800-3929 CT

Mobile Straddle Crane

Mobile Straddle Crane

POINT OF CONTACT

MSG D. Bowen
HQ Military Airlift Command, TRXF
Scott AFB, IL 62225-5001
Autovon 576-4951/Commercial (618) 256-4951

ITEM DESCRIPTION

The Mobile Straddle Crane is for use by major aerial ports to handle the movement of ISO containers and shelters by air. There are two types of Mobile Straddle Cranes: the 50K and the 75K. The Mobile Straddle Crane has the capability of lifting ISO tactical shelters, surface containers, and air/surface containers. The unit is able to operate within the confines of an aerial port and provide the capability to transfer shelters and containers from/to trailers, aerial port high-line docks, and 25K/40K aircraft loaders. The 50K Mobile Straddle Crane can handle containers weighing up to 47,000 pounds and is air transportable (disassembled) in C-130 and larger aircraft. The 75K Mobile Straddle Crane can handle 40-foot containers weighing up to approximately 70,000 pounds and is for use at strategic aerial ports.

STATUS

The Air Force does not have the Mobile Straddle Cranes currently assigned. The Mobile Straddle Crane has successfully completed tests to assess its military utility as a container handling system, to determine its deployability by air, and to assess its suitability for use in military airlift operations. The tests were conducted at Pope AFB, NC, by the USAF Airlift Center. It was also tested in Korea during a test shipment of Air Force containerized munitions. The Mobile Straddle Crane was tested at the discharge pier and during the train offloading at the ammunition storage site. The test successfully demonstrated the deployability of the crane and identified constraints while working in an area not specifically designed for container operations.

The Military Airlift Command (MAC) Statement of Operational Need (SON) for a Mobile Straddle Crane was approved by the Air Force. The present airlfit requirement is for 39 strategic loaders and 16 air transportable loaders. Funding was programmed for FY85-86 to satisfy this requirement. A production contract was awarded to Mi Jack during 4QFY88 to produce 16- 50Ks and 39-75Ks.

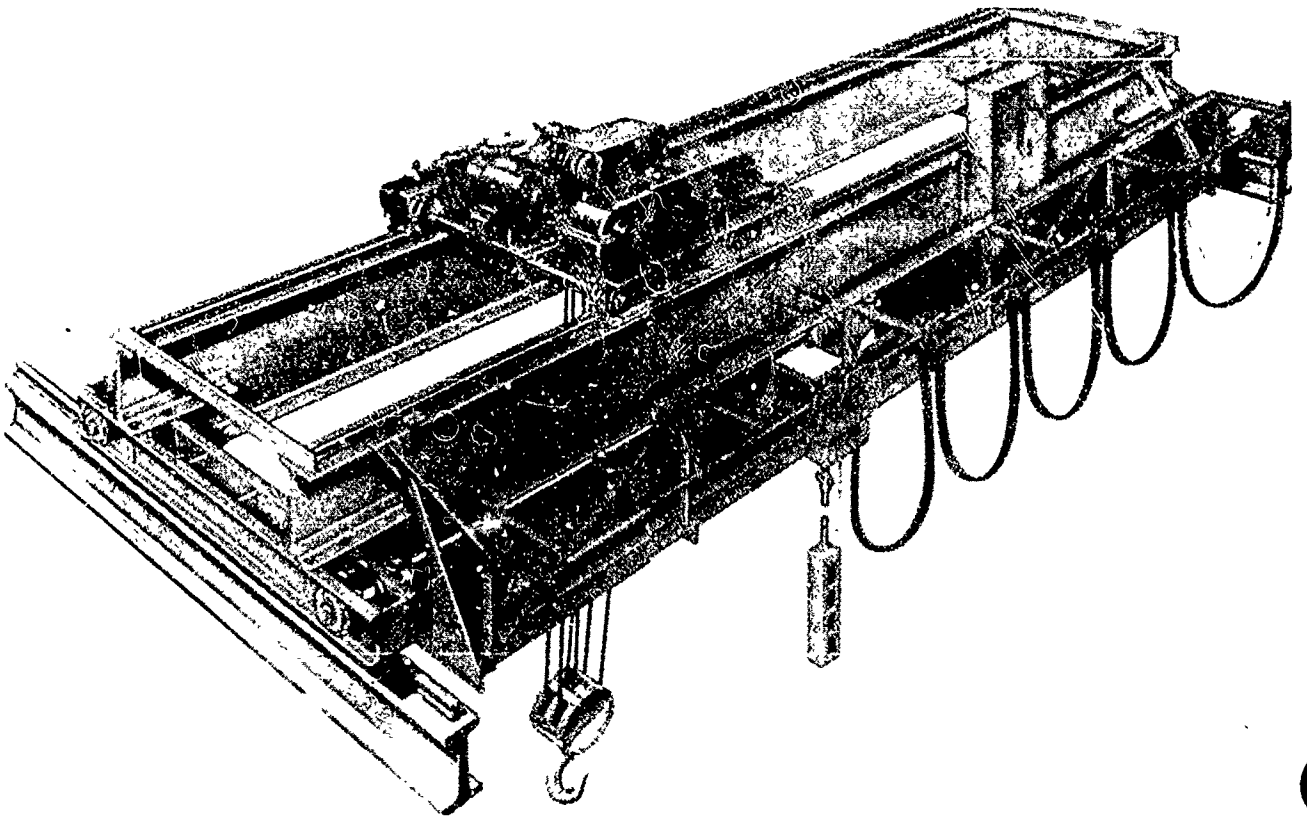
PROGRAM PLAN

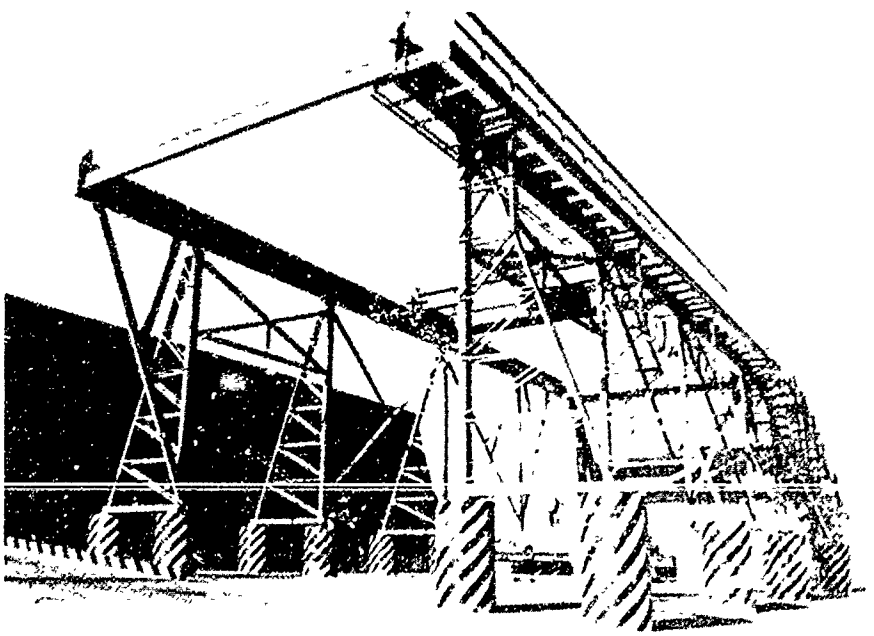
There is a delay in the program due to price increases during contract negotiations.

NSNs

50K: 3810-01-208-0996 CT
75K: 3810-01-208-3338 CT

35-Ton Bridge Crane





35-Ton Bridge Crane

POINT OF CONTACT

MSG D. Bowen
HQ Military Airlift Command, TRXF
Scott AFB, IL 62225-5001
Autovon 576-4951/Commercial (618) 256-4951

ITEM DESCRIPTION

The 35-Ton Bridge Crane provides major aerial ports the capability to build up pallets for air drop missions and to transfer fully loaded ISO shelters, air/land and surface containers from trucks/trailers to adapter systems and aircraft loaders. The bridge crane is not mobile and provides the capability to support limited container movements.

STATUS

Bridge cranes are installed at the following aerial ports: Dover, Travis, Mildenhall, Ramstein, Rhein-Main, Clark, and Kadena.

PROGRAM PLAN

Install the Bridge Cranes as new facilities are constructed.

NSN

Not applicable.

PART VI

DELETED PROGRAMS

Over time, many programs have been added and deleted from the Container System Hardware Status Report. Listed below are the programs which have been deleted. These programs are listed under the edition of the report from which they were deleted. The programs were deleted from the report for many reasons, including: lack of funding; lack of user support; completion of the program; individual service program combined into a joint service program; or, in rare cases, the POC could not be contacted to determine the status of the program.

July 1976 Status Report

Aerocrane, Ultra Heavy, Vertical Lift
Container Handling in Terminal Operations (CHITO) Equipment
Klemp Klamp Detachable Container Clamp
Lightweight Top Lift Attachments
Logistics-Over-The-Shore (LOTS)
Ship-to-Shore Balloon Transport System (BTS)
10,000-Pound Capacity Forklift Rough Terrain
Type "B" Restraint System for Commercial Containers (Value Engineering)
Type "C" Restraint System for Commercial Containers (Foster Miller)
Type "C" Restraint System for Commercial Containers (Kappa Sys Inc)
US Coast Guard Actions

January 1977 Status Report

Automatic Air Valving Surface Effects Device (ASVSED)
Container Condensation Test
Tug, Large, Inland and Coastal
Tug, Small, Harbor and Inland Waterway

January 1978 Status Report

50,000-Pound Capacity Container Handler, Side Loader (Cochran Western)
Railcar, Modified Flatbed
300-Ton Self-Discharging, Beaching Lighter (BDL)
Type "A" Restraint System for Commercial Containers (Brooks & Perkins)
Type "B" Restraint System for Commercial Containers (Brooks & Perkins)

July 1978 Status Report

4,000-Pound Capacity Forklift Truck Conventional

January 1979 Status Report

CCIRRS

Container Insert

Lancer Boss Sideloader

January 1980 Status Report

67,000-Pound Capacity Container Handler

July 1980 Status Report

40-Foot Platform Container, Military (Flatrack)

Mobile Port Modules

January 1982 Status Report

Aircraft Mobile Loader

January 1983 Status Report

Conventional Multi-Purpose Barges (Trans Hydro Barges)

INSERT

Navy Internal Restraint System (IRS Kit) for Commercial Containers

Pallet Container (PALCON)

Shore Side Trafficability and Storage Facility Construction

Wood Dunnaging Restraint System (Savanna)

January 1984 Status Report

Container Offloading and Transfer Systems (COTS) Relative Motion Mitigation

January 1985 Status Report

None

1986 Status Report

Barge, Knockdown, Rapid Deployable (BK)

Container Offloading and Transfer System (COTS); COD and TCDF COTS Crane Support

Container Offloading and Transfer System (COTS); Temporary Container Discharge Facility (TDCF)

1989 Status Report

Air/Surface Intermodal General Purpose Container
Container Offloading and Transfer System (COTS), Crane on Deck (COD)
Container Offloading and Transfer System (COTS), Helicopter Offloading
50,000-Pound Capacity Depot and Terminal Container Handler, Front Loader
40-Foot Flatrack
Lightweight Container Handler
Pre-Staged Ammunition Loading System (PALS)
Ship Sheets for Unstuffing Containerized Ammunition
Spreader Bars, Remote Control
Super Jack Mobile Loading System
TRICON

1990 Status Report

PLS Container (COMPODS)
Rough Terrain Container Transporter (RTCT)
Temporary Container Discharge Facility (TCDF)

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